

# An Unusual Cause of Abdominal Pain and Pollakiuria: Dermoid Cyst: Case Report

## Pollaküri ve Karın Ağrısının Nadir Bir Nedeni: Dermoid Kist

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**ABSTRACT** Although pollakiuria can be observed independently, it can also be a symptom of urinary tract infection (UTI), bladder instability, nephrolithiasis, or concentrated acid urine. We present a case initially diagnosed as a recurrent UTI with a dermoid cyst diagnosis following surgery. An 11-year-old girl presented with frequent urination and abdominal pain. It was learned that she had taken antibiotherapy for a UTI diagnosis 7 times. The urinary culture was sterile. It was observed that there was pressure on the bladder in urinary ultrasonography (USG). A cystic lesion was located in the right lodge in the abdominal USG, cystectomy was performed. Histopathological examination was reported as dermoid cyst. It must be kept in mind that frequent urination in children can also be caused by formations such as dermoid cysts placing pressure on the bladder, as in our case, and USG, which is a simple and harmless method, can play a significant role in its detection.

**Key Words:** Dermoid cyst; child; ultrasonography

**ÖZET** Pollaküri izole görülebileceği gibi idrar yolu enfeksiyonu (İYE), mesane instabilitesi, nefrolitiazis veya konsantre asit idrarın bir bulgusu olabilir. Başlangıçta tekrarlayan İYE tanısı alan ve takibinde dermoid kist tanısıyla opere edilen bir olguyu sunduk. On bir yaşında kız hasta sık idrara çıkma ve karın ağrısı yakınması ile başvurdu. Yedi kez İYE tanısıyla antibiyoterapi aldığı öğrenildi. İdrar kültürü steril idi. Üriner ultrasonografide (USG) mesane duvarına bası olduğu görüldü. Abdominal USG'de sağ over lojunda kistik lezyon yer almaktaydı, kistektomi gerçekleştirildi. Histopatolojik inceleme dermoid kist olarak rapor edildi. Bizim olgumuzda olduğu gibi mesaneye bası yapan dermoid kist gibi oluşumların da çocuklarda sık idrara çıkmanın nadir bir nedeni olabileceği ve bunun tespitinde basit ve zararsız bir yöntem olan USG'nin önemli rolü olduğu göz önünde bulundurulmalıdır.

**Anahtar Kelimeler:** Dermoid kist; çocuk; ultrasonografi

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Frequent urination in children is a hallmark of possible underlying urinary disease. Pollakiuria is defined as daytime urinary frequency with small urine volumes and without dysuria.<sup>1</sup> Pollakiuria is seen in early childhood (4-6 years) in both genders and is usually associated with psychosocial problems or recent emotional stress. Usually, it runs a benign, self-limiting course over 6 months. Apart from reassurance, no specific treatment is necessary.<sup>2</sup> Children presenting with frequent urination, however, merit clinical investigation must to exclude other pathological causes.

Particular attention should also be directed toward potential spinal dysraphism. A complete urinalysis may exclude most of the possibilities, such as urinary tract infection (UTI), hematuria, glycosuria, and renal tubular dysfunction. Hypercalciuria, with or without urolithiasis, is a special entity that may also present with frequency, urgency, microscopic hematuria, or enuresis.<sup>3</sup> It has been suggested that mycoplasma, ureaplasma, and perhaps even viruses may be responsible for pollakiuria.<sup>2</sup> It has also been reported as co-existing with tic disorders and attention deficit hyperactivity disorder.<sup>2,4</sup> The management approaches include emotional support and dietary restriction of acidic beverages, oxalate-rich beverages, and bladder irritants such as caffeine.

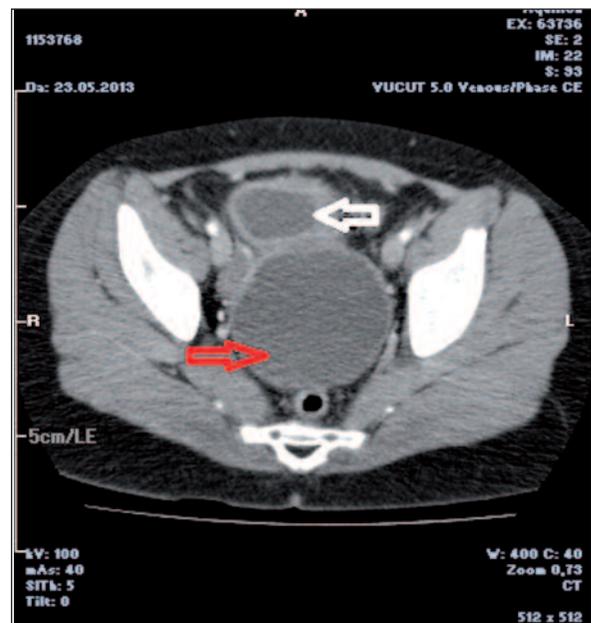
## CASE REPORT

An 11-year-old girl presented with the complaint of frequent urination and from time to time lower abdominal pain. No other symptoms, such as vomiting, fever, diarrhea, or constipation were noted by the patient. She had been treated with antibiotics 7 times over the previous 3 years as, despite sterile urine cultures, she had been regarded as having had UTIs. She was the first child of healthy parents; there was no history of consanguinity. She was born at term by normal vaginal delivery. Her infantile course was uneventful. Her voiding history showed that she had had no day- or night-time incontinence since 2 years of age although over the preceding 3 years, she had urinated at least 7 times a day. She had no pain, difficulty, intermittency, or urgency during micturition. On physical examination her vital signs were in the normal ranges. Her weight was at the 25<sup>th</sup> centile and height at the 50<sup>th</sup> centile for her age. A systemic examination was unremarkable. Laboratory tests revealed a normal whole blood count and normal kidney and liver function and electrolytes. Urinalysis was normal; hematuria, pyuria, and proteinuria were absent, and the urine culture was sterile. Urinary ultrasonography (USG) showed that there was pressure on the posterior wall of the bladder. Abdominal USG examination revealed an oval anechoic cyst in the right ovary measuring 72x58x48

mm with a smooth contour. No follicular activity was observed. The uterus and the left ovary were normal. A computed tomography scan showed a mass (72x70x65 mm) arising from the pelvis neighborhood and the posterior wall of the bladder. The mass was multiloculated, containing fat and calcific tissue components. There was an associated mass effect on the adjacent uterus and contracted urinary bladder (Figure 1). Ovarian cystectomy was performed with laparotomy. The cut surface showed multiloculate filled cysts. On histopathologic examination, the mass contained areas of keratinous material, skin, and subcutaneous tissue, including sebaceous glands and hair. With these findings, mature cystic teratoma was diagnosed. Postoperative recovery was uneventful. The patient was discharged after recovery. At the 6-month follow-up, pollakiuria had not recurred. Consent forms were obtained from the patient and her parents.

## DISCUSSION

Dermoid cysts that are congenital and localized on the neck, head, or trunk are usually visible at birth. In some instances, careful medical examination



**FIGURE 1:** Abdominal computed tomography showing mass (red arrow) and contracted urinary bladder (white arrow).

may be necessary to identify a dermoid cyst.<sup>5</sup> Intracranial, intraspinal, or intra-abdominal dermoid cysts may be suspected after specific or nonspecific neurologic or gynecologic symptoms occur. In these instances, imaging studies may help to distinguish dermoid cysts from other tumors or organ malformations.<sup>6</sup>

Ovarian tumors occur in approximately 2 percent of adolescents and young adult women. Most of them are germ cell tumors, and most of the germ cell tumors are dermoid cysts (or mature cystic teratomas), that is, benign neoplastic cysts. These tumors contain ectodermal, mesodermal, and endodermal tissue (i.e., hair, bone, teeth, adipose tissue, skin, etc). They can present with dull abdominal pain, pollakiuria, or a mass, but they are frequently asymptomatic and found incidentally on imaging due to calcification or increased echogenicity. They may be bilateral in 7 percent of adolescents. They may also increase the risk of ovarian torsion, and approximately 1 to 3 percent can rupture.<sup>7</sup>

USG is the preferred initial method for evaluating pelvic pathology. The USG examination is usually initiated transabdominally. The bladder does not have to be full; however, if the ovaries cannot be visualized, it may be necessary to have the patient fill her bladder to a comfortable capacity. Often in these cases, the entire examination can be performed transabdominally. Transabdominal scanning is important for evaluating the upper pelvis and abdomen, and can detect appendicitis,

as well as nephrolithiasis, ovarian cysts, tumors, and tubo-ovarian abscess in some cases.<sup>8</sup> Computed tomography of the abdomen and pelvis may be helpful in patients in whom diagnostic uncertainty persists after laboratory and USG evaluation, especially those in whom nephrolithiasis or a mass is suspected, as in our case.<sup>9</sup>

If UTI is suspected, urine analysis and culture should be performing before antimicrobial treatment. Renal USG has completely replaced intravenous pyelography for assessing the gross anatomy of the urinary tract, and it is routinely performed after the diagnosis of the first UTI. Previously the USG findings in our case had been normal, but USG was repeated as the patient's symptoms continued, and the mass was finally observed. USG is a noninvasive test that can demonstrate the size and shape of the kidneys, the presence of duplication and dilatation of the ureters, and the existence of gross anatomical abnormalities, such as a horseshoe kidney. Notwithstanding, it is a subjective test because it depends on personal experiences and machine quality. We therefore propose that repeat USG be performed in patients with ongoing symptoms and without vesicoureteral reflux.

In conclusion, repeated USG is a useful approach for likely intra-abdominal conditions after UTIs are excluded in children with voiding dysfunction symptoms because excision of the location for pathology may provide a definitive cure.

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