



# A Case of Cystitis Mimicking Bladder Tumor

## Mesane Tümörünü Taklit Eden Sistit Olgusu

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### ABSTRACT

Chronic cystitis is a usual inflammatory disease of the bladder in children. Patients typically show irritative voiding symptoms. In addition, bladder mass accumulation with the possibility of malignancy can rarely be observed. We present a 12-year-old male patient in whom radiological investigations showed a focal papillary lesion. In this paper, we aimed to discuss the management of chronic cystitis.

### Keywords

Bladder cancer, cystitis, diagnosis

### ÖZ

Kronik sistit çocuklarda sık görülen enflamatuvar bir hastalıktır. Hastalar tipik olarak irritatif işeme semptomları gösterirler. Bu hastalarda bazen mesanede kitle görülebilir ve bu durum mesane kanseri ile karışabilir. Biz radyolojik incelemelerde fokal papiller lezyon saptanan 12 yaşında bir erkek hasta olgusunu sunarak kronik sistit yönetimini tartışmayı amaçladık.

### Anahtar Kelimeler

Mesane kanseri, sistit, tanı

## Introduction

Chronic cystitis, which can be a chronic papillary reaction to the injury of the bladder mucosa, may be seen as a benign papillary lesion mimicking papillary urothelial tumors. Similar lesions can occur throughout the urothelial epithelium in the urethra, ureter and renal pelvis named as polypoid urethritis, polypoid ureter and pyelitis, respectively (1). Parasitosis, food and drug allergies, tuberculosis, malignancies, bladder injury, chronic bladder irritation, urinary bladder catheterization, and bladder surgeries can be predisposing factors via affecting the immune system (2,3,4).

## Case Presentation

A twelve-year-old male patient was admitted with the complaint of gynecomasty. The patient had no urological symptoms, such as pain or dysuria, and he did not have a history of previous surgery. Complete blood count revealed the followings: neutrophils: 40.1%, lymphocytes: 41.6%, monocytes: 7.4%, basophils: 0.3%, eosinophils: 10.6%, hemoglobin: 13.3 g/dl, and white blood cells: 7900/ml. Eosinophils were double than the normal level. The biochemical and hormonal parameters were normal. There were no erythrocytes and leukocytes in microscopic examination of the urine. Urine specific

gravity was 1024 and nitrite and urine cultures were negative. There was a smooth eccentric thickening of the left side wall of the bladder towards the bladder base on computed tomography images (Figure 1). Cystoscopic examination revealed a 1x1 cm polypoidal erythematous mass on the left ureteral orifice superolaterally (Figure 2). Trans-urethral resection (TUR) of the mass was done. Histopathological examination showed the majority of the homogeneous acellular eosinophilic material accumulation in the lamina propria and chronic inflammation on the surface (Figure 3a). Lamina propria contained an intense eosinophilic material accumulation around and in the vessels (Figure 3b). Congo-red showed a positive staining in the eosinophilic material accumulated areas (Figure 3c). Eosinophilic material accumulation indicated negative crystal violet staining (Figure 3d). The case was reported as an amyloid-negative chronic active cystitis histopathologically.

## Discussion

Chronic cystitis is not so rare in childhood and the symptoms can change according to the size of the area affected in the bladder. In our case, chronic cystitis was involving only the left orifice, however, in other reported cases the bladder mucosa was totally impressed (2,3). Eosinophilic cystitis (EC), another rare condition, is a benign disease,

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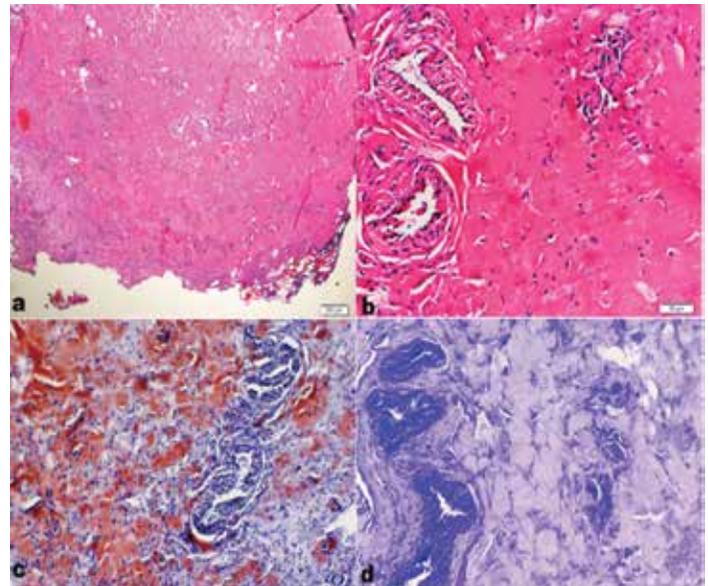


**Figure 1.** Non contrast-enhanced computed tomography showing intraluminal mass lesion with marked arrow



**Figure 2.** Cystoscopy shows papillary lesion like a bladder tumor

in which eosinophils can affect myofibroblastic inflammation, mimicking bladder tumors. Benign tumors of the bladder are rare in childhood. Bladder tumors in childhood also appear locally. To distinguish cystitis from tumors via radiological imaging methods is not possible. Instead of aggressive treatments, bladder-sparing approaches, including TUR or partial cystectomy are recommended to control these benign inflammatory lesions in children (5). In this age group, cystoscopic examination with histopathological evaluation should be performed for differential diagnosis. EC, which is characterized by massive eosinophilic infiltration of the bladder wall, is a rare inflammatory lesion of the bladder. It is often confused with bladder tumors and may cause urinary tract infections (6). It has been postulated that the unwanted antigen enters the bladder and forms antigen-antibody complexes, which bringing and accumulating eosinophils into the bladder wall (7). Pollen, dust, mites, and food



**Figure 3.** a) Histopathological examination was shown that the majority of the homogeneous acellular eosinophilic material accumulation in the lamina propria and chronic inflammation seen on the surface, b) Lamina propria is contained an intense eosinophilic material accumulation around and vessels, c) Kongo-red showed a positive staining in the eosinophilic material accumulated areas, d) Eosinophilic material accumulation indicated negativity with crystal violet

allergens are known as the priority allergens. Some allergic diseases, such as asthma are believed to be associated with EC, however, any specific allergen was not detected in the present case (8). Our patient was a 12-year-old male and had no known history of allergy.

## Conclusion

Cystitis is more common than bladder tumors in childhood and can sometimes mimic bladder tumors. Biopsy and histopathological examination is the first step for diagnosis. Treatment options vary according to the diagnosis.

## Ethics

Informed Consent: Consent form was filled out by all participants.

Peer-review: Internal peer-reviewed.

## Authorship Contributions

Surgical and Medical Practices: Ahmet Çamtosun, Ramazan Altıntaş, Concept: Ramazan Altıntaş, Design: Ahmet Çamtosun, Hüseyin Çelik, Data Collection or Processing: Ahmet Çamtosun, Nusret Akpolat, Analysis or Interpretation: Ahmet Çamtosun, Literature Search: Ahmet Çamtosun, Hüseyin Çelik, Writing: Ahmet Çamtosun, Ramazan Altıntaş.

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