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Case Report

Intracavitary lesion caused by bladder wall stone and mimicking bladder tumor

Ibrahim Topcu[1], Fatih Oguz[1], Ilhan Gecit[1], Fatih Sancaktar[1], Ayse Nur Akatli[2]

[1]Inonu University, Faculty of Medicine, Department of Urology, Malatya, Turkey
[2]Inonu University, Faculty of Medicine, Department of Pathology, Malatya, Turkey

Abstract

We present a 28 year-old patient with insidental intramural stone covered by bladder mass. The pathology was rarely seen cystitis glandularis with intestinal metaplasia. During cystoscopy, stone was not seen, we resected the mass than stone was appeared in buried into the wall and removed from the bladder wall. The stone was fragmented with holmium laser. The pathology of the mass was cystitis glandularis with intestinal metaplasia whish is rarely seen and may be malign by the time. We followed up the patient with cystoscopy every 3 months and no recurrens was detected.

Keywords: Bladder tumor, eosynophilic cystit, blader stone

INTRODUCTION

Bladder lesions can be benign and malignant increases with age. Urothelial carcinomas are the most common malign bladder lesion (> 90%). However, some urothelial or non-urothelial lesions mimic carcinoma and may cause problems in differential diagnosis (1). To distinguish these tumor-like lesions from malign lesions is undoubtedly important for the treatment and follow-up of the patient.

Many lesions, such as chronic cystitis, eosinophilic cystitis, cystitis glandularis, cystitis cystica, intestinal metaplasia, can mimic urothelial carcinoma. Cystitis cystica, cystic enlargement of the islands and eosinophilic secretory in the luminal cavities and cystitis glandularis define the appearance of a columnar or cuboidal appearance of these luminal cells in the glands, which are distinct apical cytoplasm (2,3). In the presence of goblet cells between luminal cells is called intestinal type cystitis glandularis and this has more diagnostic problems than the classical type of cystitis glandularis because it is miscible with adenocarcinoma.

Intestinal metaplasia (IM) has an incidence of between 0.1% and 0.9%. IM is often associated with chronic inflammation of the urothelium (4-6). IM can be asymptomatic or frequently presents with hematuria or voiding symptoms. On cystoscopy, IM can be seen in form of solid or papillary lesions which can mimic urothelial carcinoma. But IM may be seen both in the normal bladder and in association with adenocarcinoma of the bladder (5-7). In adenocarcinoma, we expect more nuclear atypia, mitosis and deep lamina propria invasion by irregular glands (1,3,8).

The relationship between cystitis glandularis with intestinal metaplasia and tumor development is controversial. In some studies, no association between IM and a risk for the development of adenocarcinoma have shown in long-term follow-up (9,10). But still IM rarely shows dysplastic changes such as those seen in the gastrointestinal tract. Besides some have revealed a relationship between adenocarcinoma and cystitis glandularis with IM (3).

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Corresponding Author: Ibrahim Topcu
E-mail: ibrahimtopcu15@hotmail.com

In another study with 250 patient, 20 of them had Intestinal metaplasia with dysplasia and with concurrent adenocarcinoma in eight of 20 (40%) cases (11).

Consequently, these patients should not be removed from follow-up. We presented a case of cystitis glandularis and intestinal metaplasia due to intraluminal stone irritation.

Case Report

A 28-year-old male patient was admitted to the emergency department with a car accident. There was only smoking as a risk factor. On the abdominal CT scan of the patient, only a bladder stone about 2 cm is detected (Picture 1). So the patient referred to our clinic. We performed an

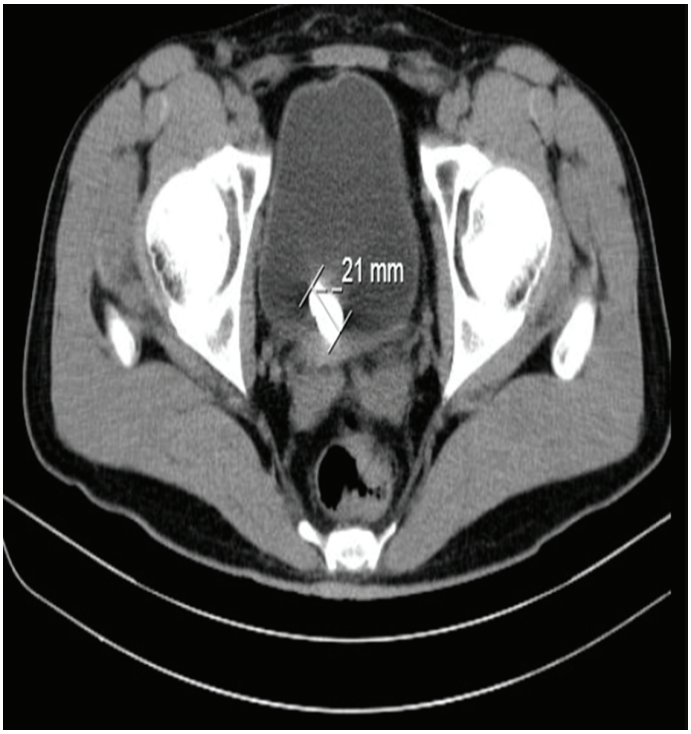

Figure 1. Bladder stone seen on abdominal CT

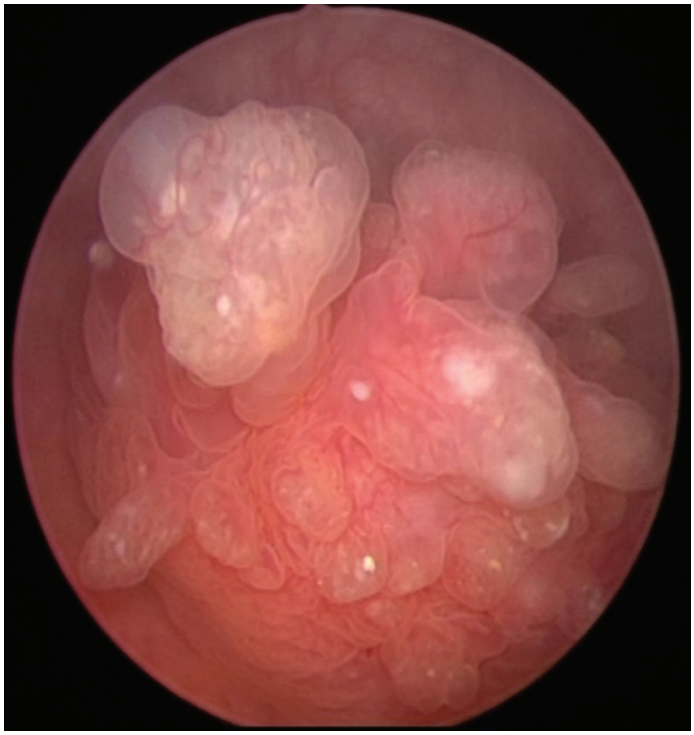

Figure 2. **Cystoscopic view of the lesion**

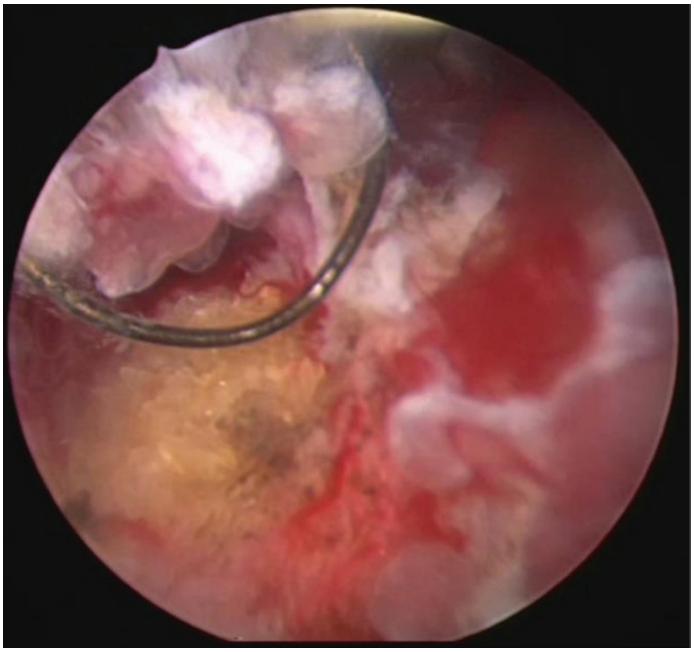

Figure 3. **Bladder stone buried into the mass**

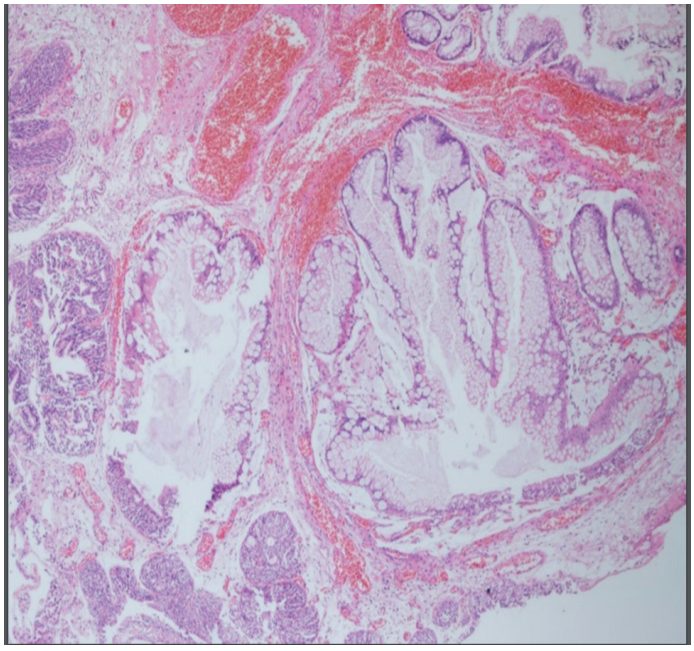

Figure 4. **Glandular structures demonstrating urothelial epithelium and goblet cells, and showing colonic mucosa like features in the lamina propria of the bladder (H&E,x40)**

ultrasound image and saw suspected papillary mass extending bladder lumen. Then cystoscopy was done under spinal anesthesia, a well-circumscribed solid-based mass extending to the bladder lumen in the right orifice localization detected (Picture 2). During the resection of the mass, we saw a 2 cm stone buried into the bladder wall bottom of the mass (Picture 3). Then stone removed and the procedure terminated after taking as a separate example from the base of the mass. Pathological samples are shown in Picture 4.

There were no complications in the postoperative follow-up and the patient was discharged 3 days later

His pathology result was reported as cystitis glandularis and intestinal metaplasia. Control cystoscopies were performed every 3 months and no mass formation was observed. The patient is still under follow up.

DISCUSSION

It is unusual to see cytological findings of glandular cells in a urine specimen (12,13). The differential diagnosis of this includes cystitis cystica, cystitis glandularis (with or without intestinal metaplasia), villous adenoma of the bladder, in situ and infiltrating adenocarcinoma or rarely urothelial carcinoma with aberrant glandular differentiation (14). Cystitis glandularis has focal or diffuse glandular metaplasia of the urinary epithelium, (15) either due to chronic irritation of the urothelium or changes in the Von Brunn nests. The cells can change into cuboidal or columnar form and may produce mucin, taking on the appearance of intestinal-type goblet cells. So this type of variant is called cystitis glandularis with intestinal metaplasia (IM). Despite the urothelial origin, both bladder adenocarcinoma and cystitis glandularis stain positive for intestinal markers and are negative for urothelial marker most of time (16).

They are often placed in the bladder trigone, but also seen in the ureter and renal pelvis (17). The incidence of IM is 0.1–0.9% and increases with age; most commonly seen at fifth and sixth decades (17,18). Many factors that cause chronic irritation have been charged in the etiology; such as bladder exstrophy, bladder and kidney stone and neurogenic bladder (18).

There is contradictory evidence of whether IM is a premalignant or purely benign lesion. In some studies, IM has an association with adenocarcinoma (9,10,19). Smith et al showed IM concurrently with adenocarcinoma or urothelial carcinoma in 37% of patients but none of the patients with IM developed subsequent carcinoma (10). Likewise, in another study, there was no development of bladder carcinoma in long-term follow-up of 53 patients with intestinal metaplasia (9). Besides, a study with 250 patient, 20 of them had Intestinal metaplasia with dysplasia and with concurrent adenocarcinoma in eight of 20 (40%) cases (11).

Cystitis glandularis is sometimes a proliferative disease. When there is recurrence, antibiotics, NSAIDs, anti-allergy drugs and repeated resection can be done (20) but this disease may be resistant to these treatments. Takizawa et al. used celecoxib, one of COX-2 inhibitors, in a patient with repeated disease many time and showed no recurrence with this oral treatment (21). So this treatment can be used in resistant cases.

Additionally, as the natural history of IM is poorly understood, these patients should be followed up with either endoscopic or radiological surveillance until the evidence is more robust.

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Ibrahim Topcu ORCID:0000-0002-6526-0255
Fatih Oguz ORCID:0000-0001-7292-0306
Ilhan Gecit ORCID:0000-0001-7329-6971
Fatih Sancaktar ORCID:0000-0001-5688-4739
Ayse Nur Akatlı ORCID:0000-0002-9677-2456

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