—Case Reports—

A Case of Asymptomatic Cystitis Glandularis Found Incidentally with Ultrasonography at a Private Clinic

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Abstract

A 46-year-old man was transferred to our hospital because of a bladder mass. The mass could not be distinguished from a primary bladder tumor or a tumor invading from another organ with computed tomography, magnetic resonance, or cystoscopic examination. Transurethral resection of the mass was performed, and the pathological diagnosis was typical cystitis glandularis. The patient has been followed up with cytologic examination and ultrasonography, and after 10 months there has been no new growth of the mass or malignant change.

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Key words: urinary bladder, cystitis glandularis, diagnosis, treatment

Introduction

Cystitis glandularis is a rare proliferative disorder of the mucus-producing glands within the mucosa and submucosa of the urinary bladder epithelium[1]. It is characterized histologically by mucosal and submucosal foci of bladder transitional cells that have undergone glandular metaplasia[2]; cystitis glandularis can result in adenocarcinoma[3–5]. Chronic bladder infection and inflammation are thought to be the main risk factors for the development of cystitis glandularis[2], and chronic bladder irritation is the most common complaint in patients with this condition. We report a case of typical glandular cystitis with an asymptomatic bladder mass that was found incidentally on ultrasonography.

Case Report

A 46-year-old man was transferred to our hospital because of a bladder mass that had enlarged since being found incidentally with ultrasonography at a private clinic 1 year earlier. He had no symptoms or significant past medical history, and the results of physical examination and blood tests were normal. Urinalysis and urine cytologic examination revealed inflammatory cells, mostly neutrophils, and no malignant cells.

Ultrasonography showed an irregular mass in the bladder neck, and intravenous pyelography showed a bilateral normal upper urinary tract with filling defects of the bladder (**Fig. 1**). Plain computed tomography (CT) demonstrated an irregular anterior bladder wall without a mass, but magnetic resonance (MR) demonstrated a hypervascular

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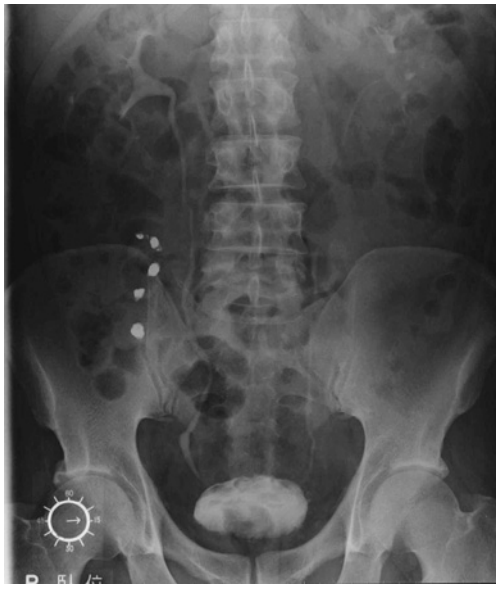

Fig. 1 Intravenous pyelography revealed a bilateral normal upper urinary tract and filling defects of the bladder.

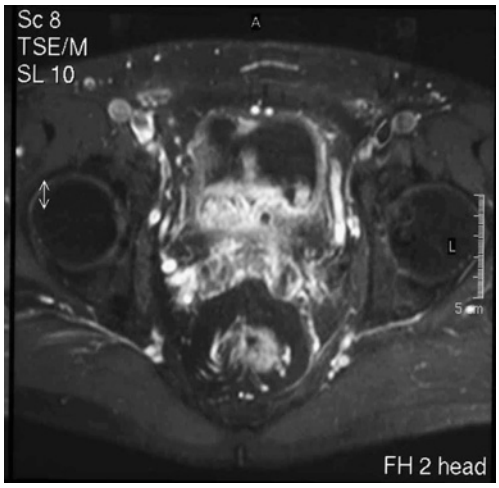

Fig. 2 On T1-weighted images with contrast enhancement, the lesion showed a heterogenic signal intensity with a central branching high-intensity pattern.

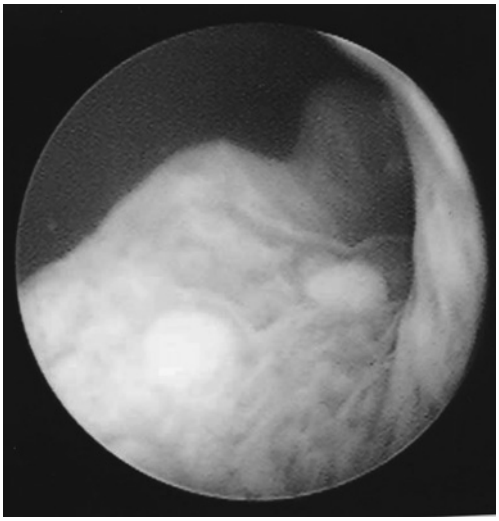

Fig. 3 Cystoscopy confirmed an edematous mass located in the neck, trigone, and posterior wall of the bladder, but this lesion could not be distinguished from a primary bladder tumor or a tumor invading from another organ.

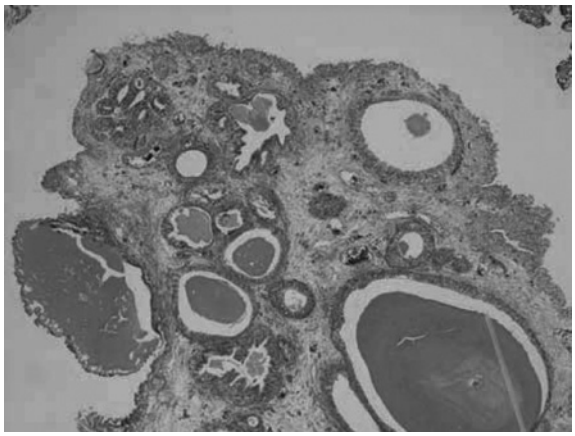

Fig. 4 Histopathogical examination showed typical cystitis glandularis consisting of glands in the lamina propria lined by columnar cells without evidence of mucin production. (HE stain, ×100)

polypoid mass, including small cystic structures, protruding from the anterior wall to the neck of the bladder. In particular, the lesion showed a heterogenic signal intensity with a central branching high-intensity pattern on T1-weighted images with contrast enhancement **(Fig. 2)**. The MR images suggested that the mass was cystitis glandularis or cystitis cystica, but a malignant tumor could not be ruled out. Cystoscopy confirmed the presence of an edematous mass located in the neck, trigone and posterior wall of the bladder, but this lesion could not be distinguished from a primary bladder tumor or a tumor invading from another organ **(Fig. 3)**. Therefore, we performed partial transurethral resection (TUR) of the mass for diagnosis, because the blood supply to the lesion was too great to allow complete TUR.

The pathological diagnosis of the mass was cystitis glandularis of the typical type **(Fig. 4)**. Additional treatment was not performed because the lesion was not malignant and the patient had no symptoms. Follow-up with repeated cytologic examination and ultrasonography has been performed, and after 10 months there has been no

new growth of the mass and no malignant change.

Discussion

Cystitis glandularis is a metaplastic alteration of the urothelium in the urinary bladder which is thought to be caused by chronic inflammation and irritation[4,6]. There are two subtypes of cystitis glandularis with distinct morphology and behavior. The typical type, as in the present case, is characterized by luminal structures within the lamina propria which have an inner lining of columnar or cuboidal cells and are bound peripherally by transitional cells. The intestinal type, which is also referred to as intestinal metaplasia, has a similar glandular architecture in the lamina propria but contains abundant mucin-secreting goblet cells in the lining epithelium[7]. These two subtypes may coexist, but one or the other is usually predominant[8].

Symptoms of chronic bladder irritation, such as urgency, frequency, and dysuria, are the most common chief complaints. However, patients often present with an asymptomatic bladder mass that is found incidentally on imaging studies, as in the present case. Intravenous pyelography and CT or MRI can be used to locate masses, bladder wall thickening, pelvic lipomatosis (which has been found in 75% of patients with cystitis glandularis[9]), and any obstruction associated with hydronephrosis and hydroureter. As in the present case, the neck and trigone of the bladder are the areas most often involved, but lesions in these areas cannot be distinguished macroscopically from other conditions that resemble cystitis glandularis, such as simple chronic inflammatory changes, cystitis cystica, squamous metaplasia, fibroepithelial polyps, genitourinary tuberculosis, transitional cell carcinoma, squamous cell carcinoma, adenocarcinoma, and metastatic malignant tumors. Therefore, cystoscopy with biopsy or TUR of the lesion is needed to confirm the diagnosis.

The main goals of treatment of cystitis glanduralis are relief of signs and symptoms, such as irritative voiding symptoms, obstruction, and bleeding. Treatment options range from conservative to aggressive. The first step is the elimination of any contributing source of chronic bladder irritation and can involve eradication of urinary infection with long-term antibiotic administration or removal of a mechanical irritation, such as a chronic indwelling catheter and stones. Other interventions that have been tried include steroids, dieting, YAG laser ablation, intravesical hydrocortisone instillation, radiation therapy, and chemotherapy[10]. TUR can be used to ablate tissues that may lead to tumors. Such conservative treatment is a good option for small, focal lesions, although lesions may recur. Because cystitis glandularis, particularly that of the intestinal type[3–5], is thought to be a precursor to adenocarcinoma, careful follow-up with surveillance cystoscopy is required at regular intervals, and aggressive treatment with cystectomy and urinary diversion should be considered if conservative treatment fails[10,11].

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