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Cystitis Glandularis as A Solid Mass in Bladder - A Case Report

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1. Abstract

Cystitis glandularis, a rare benign proliferative disease of the urinary bladder mucosa, is usually a microscopic finding and manifests rarely as a large visible macroscopic lesion of urinary bladder. Only few cases of cystitis glandularis presenting as bladder mass have been reported in the literature. We are reporting a case of cystitis glandularis presenting as a urinary bladder mass in a male patient, identified as a cause of macroscopic hematuria.

2. Introduction

Cystitis glandularis, also named as glandular cystitis or glandular metaplasia of the bladder, is a benign reactional metaplasia of the urothelium, not actual cystitis. It is a rare proliferative lesion of the bladder epithelium which occurs usually in a context of chronic irritation. Bladder lamina propia is characterized by urothelial nests with further differentiation to cystic or glandular lesions within a hyper-proliferative bladder urothelium [1, 2]. The entity was first described by Morgagni in 1761. Some authors described the intestinal type as a pre-malignant lesion [3] but more researchers e.g. Smith et al [4]. and Corica found no certain correlation between cystitis glandularis and adenocarcinoma [4]. Its clinical incidence is low, estimated at less than 2% of the general population [1]. Although the entity may be underestimated in this numbers, cystitis glandularis presenting as a mass in bladder is described only in case reports. Herein, we report a case of a male patient with this rare histology findings, after endoscopic resection of a bladder mass.

3. Materials and Methods

A male patient, 83 years old, was admitted to our private practice office from the Oncology Department with the cause of macroscopic hematuria for investigation. From the medical history, the patient received medication for hypertension and had a pacemaker inserted for atrial fibrillation. He had underwent transurethral resection of the prostate 3 years ago and had an indwelling catheter inserted from the retention he underwent till the operation. The blood tests were of no significance, with a hematocrit 39% and no signs of infection. Urine test showed red cells and hemoglobin. The urine culture was negative. CT pyelography was performed with no specific findings and the patient underwent flexible cystoscopy. The cystoscopy revealed a mass in the bladder neck (Figure 1) and the transurethral resection of the mass was proposed.

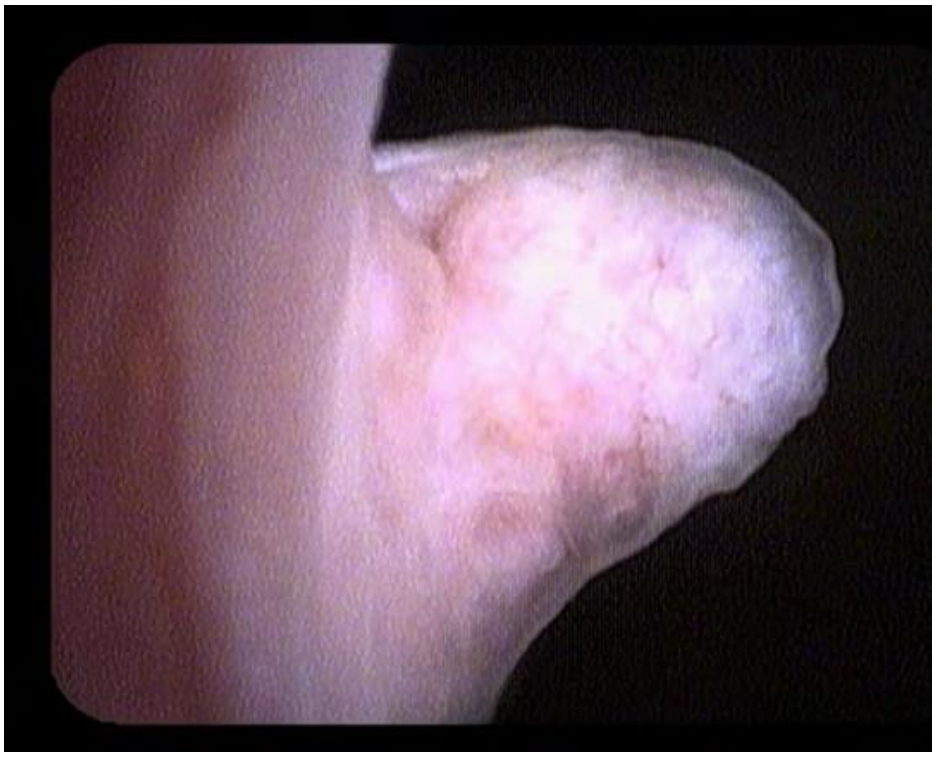

Figure 1. Endoscopic image of the bladder mass.

4. Results

The patient was operated endoscopically with bipolar loop used, the mass was resected totally and sent for histology examination. The patient left the hospital the next day with no complications according to the Clavien - Dindo classification system noticed. He did not report macroscopic hematuria ever since. The histology results revealed urothelium with cystitis glandularis. Von Brunn nests were identified with cystic dilatation and eosinophilic content. No malignancy evidence was reported in the specimen.

5. Discussion

Cystitis cystica and glandularis is a proliferative disorder of the bladder urothelium. The urothelium is formed by transitional cells. When these cells invaginate into the lamina propria they are called Von Brunn nests. At times Brunn's nests become cystically dilated forming what is referred to as cystitis cystica. When these cystically dilated central lumen is lined by glandular epithelium it is referred to as cystitis glandularis [5, 6]. Two types have been described. Typical type, wherein the lumen is lined by columnar epithelium without any mucin production and the intestinal type where the columnar cells are replaced by mucin producing goblet cells similar to those found in the colonic mucosa [7]. Chronic inflammation has been thought as a cause. It has been associated with conditions such as recurrent urinary tract infections, prolonged catheterization, chronic bladder outlet obstruction, and pelvic lipomatosis [5, 8]. In an article issued in 2020, urinary infections, long-term indwelling catheter and urinary calculus, squamous metaplasia and atypical hyperplasia were independent risk factors for recurrence [11]. In our case, the patient had an indwelling catheter inserted from the time retention had occurred till he underwent transurethral resection of the prostate. The time period was 3 months. In most of the cases, these findings are incidentally revealed in endoscopic specimens. Sometimes they can cause dysuria, urgency and hematuria or less commonly masses in the bladder are formed, like in our case. In its pseudo-tumoral major form, clinical symptoms are present in 1/3 of cases. These symptoms present in two modes: firstly, hematuria that predominates in 2/3 of cases (associated or not with other urinary disorders) and secondly, irritative symptoms of which signs include urgency, urinary burns, diurnal and nocturnal polyuria [12]. In our patient, macroscopic hematuria was the predominant symptom. Although cystitis glandularis has been implicated as a premalignant condition in many case reports, in most of them the evidence was based on the high incidence of a coexistence of cystitis glandularis and adenocarcinoma. On the contrary, a study of 166 patients found no evidence of carcinoma subsequent to typical or intestinal type with a 1 to 17 years follow-up. The results did not support that cystitis increases the future risk of malignancy, but lacks the long term follow up in some patients [4, 9, 10]. Also in a most recent article published in 2020, among 44 patients, no risk between cystitis cystica and glandularis and adenocarcinoma was found [6]. The diagnosis of cystitis glandularis may be difficult at times. It must be differentiated not only from primary carcinoma of the bladder or prostate but also from malignant tumor invading the bladder from within (carcinoma of the rectum, of the pelvic organs, lymphoma and others) and this adds to the diagnosis dilemma. Inflammatory lesions in the

peri-vesical space and foreign bodies entering the bladder from the outside must also be included in the diagnostic considerations. In the vast majority of the patients, the transurethral resection was the only therapy needed. The diagnosis of certainty is histological by analysis of chips from bladder endoscopic resection. Cystoscopy and TURB makes it possible to assess the number, size, location, appearance of tumor formation and perform biopsies or resection. Histopathology shows glandular replacement of the submucosa associated with inflammatory reaction. There have been cases in which total cystectomy was performed because of recurrence or continuance of tumor and symptoms despite frequent TUBR of the lesion [1]. Cystitis glandularis as an overt urinary bladder mass is extremely rare in the literature. Taking into account the most recent review of the literature (2022) about this topic there have only been 18 cases reported, including ours [13].

6. Conclusion

Cystitis glandularis forming a visible mass in the bladder is a rare entity. As a cause of hematuria and dysuria it should be considered in the differential diagnosis algorithm. Cystoscopy and biopsy is suggested in these cases, in order to certify the diagnosis. Due to controversial articles on this histology connection to adenocarcinoma of the bladder, more research should take place before we are certain of the role of it as a possible pre- malignant lesion and the adequate follow up of these patients.

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