

THE IMPOSTER OF URINARY BLADDER - CYSTITIS CYSTICA GLANDULARIS: CASE SERIES

DR. JAI PRAKASH¹ DR. MUKESH CHANDRA ARYA² DR. YOGENDRA³ DR. AJAY
GANDHI⁴ DR. AKASH SHARMA^{5*}

¹professor, Department Of Urology ,Sardar Patel Medical College, Bikaner,Dripswami@Gmail.Com

²senior Professor, Department Of Urology ,Sardar Patel Medical College, Bikaner,Mcaria@Yahoo.Com

³assistant Professor, Department Of Urology,Sardar Patel Medical College, Bikaner,Dryogendra99@Gmail.Com

⁵assistant Professor, Department Of Urology,Sardar Patel Medical College, Bikaner,

Ajay.Gandhi70@Rediffmail.Com

Corresponding Author

[5] Dr. Akash Sharma,Mch Urology, Sardar Patel Medical College, Bikaner

Akaashsrm@Gmail.Com

KEYWORDS

cystitis cystica
glandularis,
urinary bladder,
adenocarcinoma,
cystoscopy,
hematuria.

ABSTRACT

Background- Many types of benign lesions are seen in urinary bladder and they present as significant diagnostic challenge. As these may present as entirely benign to aggressive malignant tumor. The lesion with no pre-malignant potential may include various proliferative and reactive processes such as cystitis cystica and cystitis glandularis. There are often invaginations of hyperplastic urothelial extensions into superficial lamina propria called, Von Brunn's nests.

Aims- The present study was aimed to report our experience of presentation, diagnosis and management of patients with glandular lesions of bladder.

Methods and materials- This was a retrospective study of 9 patients with urinary bladder glandular lesion who were hospitalised at the SP Medical college and PBM group of hospitals, Bikaner in Rajasthan from January 2022 to December 2023. Data were obtained from hospital records. Patients whose follow up data were missing were excluded from the study.

Results- The median age was 50 (25-82) years and one was female and eight were males. The most common presenting symptoms were dysuria, frequency, hematuria, suprapubic pain, flank pain respectively. CT examination and Urine cytology evaluation for malignant cells were done in all patients. Most common location of lesion was posterior wall followed by postero-lateral wall. All patients underwent transurethral resection under spinal anesthesia with obturator block as and when required according to location of tumor with bipolar resection under normal saline irrigation. In follow up period none of our patient had recurrence of growth. DJ stents in patients with upper tract changes were removed after 4 weeks.

Conclusion- Cystitis cystica glandularis is a benign, proliferative condition of urinary bladder mucosa with varied presentation and should be differentiated from malignant lesions of bladder by transurethral resection and histopathological confirmation. Further studies with more number of patients are required for definite etiology and controversial association as premalignant lesion.

INTRODUCTION:

Many types of benign lesions are seen in urinary bladder and they present as significant diagnostic challenge. As these may present as entirely benign to aggressive malignant tumor. The lesion with no pre-malignant potential may include various proliferative and reactive processes such as cystitis cystica and cystitis glandularis [1]. There are often invaginations of hyperplastic urothelial extensions into superficial lamina propria called, Von Brunn's nests. These inflammatory projections are considered reactive but benign and non-malignant [2]. Cystitis cystica and cystitis glandularis occur mainly in response to chronic irritation or inflammation. They are usually asymptomatic but may present with non-specific signs and symptoms that require thoughtful attention to exclude other morphologically similar malignant lesion such as bladder adenocarcinoma [3]. Histologic differentiation of these lesion is vital for pathologists as well as urologists because it may affect the consequences, prognosis and may need different modalities compared to conventional ones and may aid to avoid diagnostic misinterpretations [4]. The present study was aimed to report our experience of presentation, diagnosis and management of patients with glandular lesions of bladder.

MATERIALS AND METHODS:

This was a retrospective study of 9 patients with urinary bladder glandular lesion who were hospitalised at the SP Medical college and PBM group of hospitals, Bikaner in Rajasthan from January 2022 to December 2023. Data were obtained from hospital records. Patients whose follow up data were missing were excluded from the study. Study was conducted in accordance with the approved protocol and ethical principles that have their origin in the declaration of Helsinki. Each patient gave written and informed consent for inclusion in the study. Age, gender and clinical factors including symptoms, site of lesion, urine cytology, cystoscopy, radiological imaging and management were noted. Patient underwent routine preoperative investigations required for anaesthetic fitness. During transurethral resection entire lesions were resected. These patients underwent urine cytology for malignant cells, urine culture sensitivity, Ultrasonography and CT Urography. [FIGURE- 1]

All these patients underwent cystoscopic bipolar resection of tumor and histopathology of tissue resected. DJ stenting or nephrostomy as and when required for upper tract changes. [FIGURE- 2] As per institutional protocol, patients were followed up 3 monthly in first year and 6 monthly later for next year.

At follow up visits, patients were subjected to clinical examination, urine cytology, ultrasound study of kidney ureter and bladder, cystoscopy. Cystoscopies were performed under local anaesthesia with standard rigid cystoscope white light cystoscopy. In follow up, patients were looked for recurrence of lesions on cystoscopy.

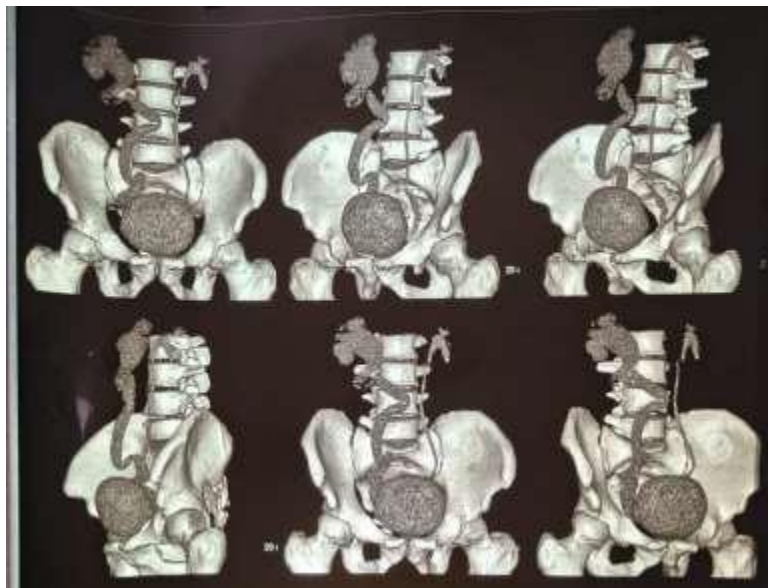


FIGURE- 1 CT IVP

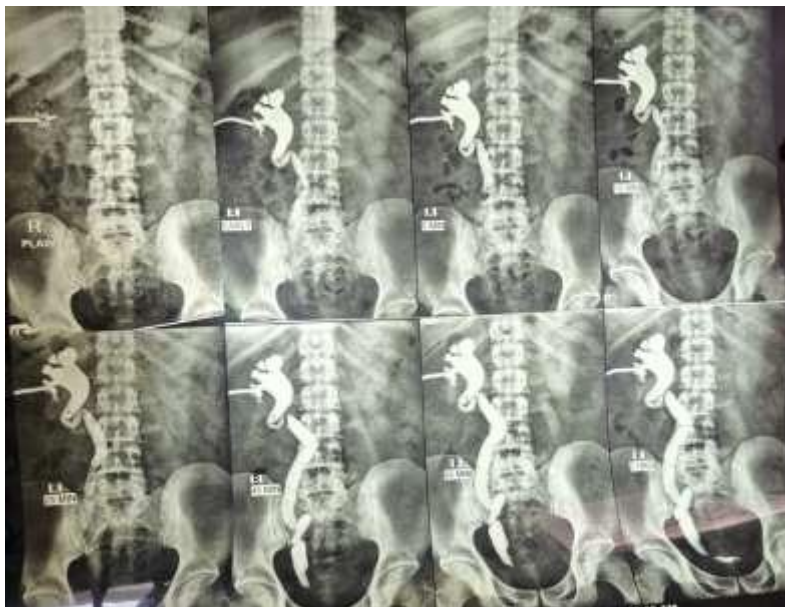


FIGURE NO-2 nephrostogram of patient with upper tract dilatation and obstructive uropathy

STATISITCAL ANALYSIS:

The data were collected, analysed and presented in form of numbers and percentages.

OBSERVATIONS AND RESULTS:

Number of patients enrolled in this study were 9 who were admitted during study period diagnosed with cystitis cystica lesion of bladder and none of our patient presented incidentally. The median age was 50 (25-82) years and out of total patients one was female and eight were males. [Table no-1]

Table no- 1 Gender distribution (N= 9)

Male	8
Female	1

The most common presenting symptoms were dysuria, frequency, hematuria, suprapubic pain, flank pain respectively. [table no-2]

Table no- 2 Clinical symptoms

Dysuria	8
Frequency	8
Hematuria	5
Nocturia	4
Supra-pubic pain	3
Sensation of incomplete voiding	3
Flank pain	2

CT examination was done in all patients for evaluation. Urine cytology evaluation for malignant cells were done in all patients for three samples and all reports were negative. Most common location of lesion was posterior wall followed by postero-lateral wall. [Table no-3]

Table no- 3 Tumor location (N=9)

Posterior wall (including trigone)	5
Postero-lateral wall	3
Dome	1

Gross appearance of tumor on cystoscopy was papillary most commonly followed by polypoidal and flat lesions. [Table no-4]

Table- 4 Type of lesions

Papillary	4
Polypoidal	2
Flat	3

All patients underwent transurethral resection under spinal anesthesia with obturator block as and when required according to location of tumor with bipolar resection under normal saline irrigation. Two cases had upper tract changes in which uretero-vesical junction was not visible on right side in one patient and bilaterally in second patient for which percutaneous nephrostomy were placed in first place later antegrade DJ Stents were placed in patients after tumor resection and HPE report confirmed. In follow up period none of our patient had recurrence of growth. DJ stents in patients with upper tract changes were removed after 4 weeks.

DISCUSSION:

This retrospective study presents experience of diagnosis and management of patients with cystitis cystica lesions of the bladder. Although the number of patients is small but it provides valuable information on presentation of the patients with benign lesions of bladder and adds to the literature. Urinary bladder lesions may have various benign proliferating processes. These lesions are thought to be the outcome of irritation of the urothelium. Sometimes these proliferative processes characterise true heterotrophic such as endometrial gland and stroma. However, to determine the origin of the lesion cytological features or a superficial biopsy specimen could be necessary [1]. Glandular lesions of bladder are difficult to diagnose clinically as they have subtle clinical manifestations and for the rarity of lesions. In present study among 9 patients most common symptom patient presented with was dysuria, frequency in 8 each followed by hematuria in 5 patients, nocturia in 4 , suprapubic pain in 3 . Flank pain was the presentation in 2 patients. LUTS were main presenting symptoms. Due to non-specificity of symptoms diagnosis of benign bladder lesions is often overlooked. Although cystitis cystica has relatively low incidence, delay in diagnosis may possibly have major health consequences. Radiological modalities have major role in diagnosis of urinary bladder lesions. Urine cytology for malignant cells helps to rule out or to be confirm the possibility of malignant bladder tumor. In the present study CT urography was done in all patients. CT urogram can detect the bladder lesions of sufficient size, measure the bladder wall thickness and evaluate for any other lesion that can cause hematuria. Cystitis cystica may appears as multiple, rounded , small sized filling defects of 2-5mm diameter in the bladder wall, although lesions can be larges or rarely appear as a large tumor like mass [5]. Posterior wall was the most common site of involvement (55.5%) by cystitis cystica followed by posterolateral wall. Papillary lesion was the most common microscopic type of lesion followed by polypoidal type. Several case series studies have revealed that there is no evidence that cystitis glandularis increases the future risk of malignancy and none of their patients were associated with pelvic lipomatosis, therefore one of the authors concluded that surveillance cystoscopy was not recommended [6-8]. This study also supports that cystitis cystica glandularis is no longer considered a precursor of bladder adenocarcinoma, and no pelvic lipomatosis was found in our cases.

Conclusion- Cystitis cystica glandularis is a benign, proliferative condition of urinary bladder mucosa with varied presentation and should be differentiated from malignant lesions of bladder by transurethral resection and histopathological confirmation. Further studies with more number of patients are required for definite etiology and controversial association as premalignant lesion.

References:

1. Williamson SR, Lopez-Beltron A, Monitroni R, Chang L. GLandualr lesions of the urinary bladder:clinical significance and differential diagnosis. Histopathology .2011;58(6):811-34.
2. Eastman R, Leaf EM ,Zhang D, True LD, Sweer RM, Seidel K, Sibert JR, Grady R, Mitchell ME, Bassuk JA. Fibroblast growth factor -10 signals development of von brunn's nests in exstrophic bladder. AmJ Physiol Renal Physiol . 2010 Nov ; 299(5): F1094-110.
3. Monini C, Angulo JC, Lopez JJ , Mimicks of urothelial carcinoma and the approach to differential diagnosis . Clin Pract .2021 Feb 25;11(1):110-123.
4. Amin MB . Histological variants of urothelial carcinoma: Diagnostic, therapeutic and prognostic implications. Mod Pathol. 2009;22(suppl2):596-5118.
5. Sureka B, Jain V, Jain S, Rastogi A. Cystitis cystic glandularis : Radiological imitator of urothelial carcinoma. Tran J Kidney Dis . 2018Jan ;12(1):10.
6. Smik AK, Hansel DE, Jones JS. Role of cystitis cystic et glandularis and intestinal metaplasia in development of bladder carcinoma. Urology 2008; 71; 915-8.
7. Agrawal A, Kumar D, Jha AA, Aggarwal P. Incidence of adenocarcinoma bladder in patients with cystitis cystica et glandularis : a retrospective study. Indian J urol 2020; 36; 237-302.
8. Yi x, Lu H, Wu Y, Shen Y, Meng Q, Cheng J et al . cystitis glandularis: a controversial premalignant lesion. Oncol let 2014; 8:1662-4.