CASE REPORT

25(107), January, 2021

ISSN
2321–7359
EISSN
2321–7367

Medical Science

A rare urological condition: Cystitis Cystica and Ureteritis Cystica - presentation with bilateral ureteric obstruction

Bander M Alamrai[1]✉, **Waleed M Alamrai**[2], **Ali H Akmalki**[3], **Ahmed A Alzahrani**[3], **Rami M Hasan**[3]

[1]College of Medicine, Imam Muhammed bin Saudi Islamic University, Riyadh, Kingdom of Saudi Arabia
[2]Department of urology, king Fahad specialist Dammam city, kingdom of Saudi Arabia
[3]Department of urology, king Fahad military medical complex city, dharana, kingdom of Saudi Arabia

Contact Information

Alamrai B Email: b.alamraimd@gmail.com
Alamrai W Email: w.alamrai@gmail.com
Almalki Email: aalialmalki92@hotmail.com
Alzahrani Email: aalialmalki92@hotmail.com
Rami M Hasan Email: rami.m.daoud@gmail.com

✉**Corresponding author**
College of Medicine,
Imam Muhammed bin Saudi Islamic University, Riyadh,
Kingdom of Saudi Arabia;
Email: b.alamraimd@gmail.com

Citation

Bander M Alamrai, Waleed M Alamrai, Ali H Akmalki, Ahmed A Alzahrani, Rami M Hasan. A rare urological condition: Cystitis Cystica and Ureteritis Cystica - presentation with bilateral ureteric obstruction. *Medical Science*, 2021, 25(107), 97-100

ABSTRACT

Cystitis cystica associated with Ureterits cystica is rare condition although it's benign; can be misdiagnosed with malignant tumor. In this report, we present this case of a patient who presented with right flank pain. CT scan showed bilateral hydroureteronephrosis. During the cystoscopy and bilateral ureteroscopy, multiple polypoidal like lesion in the bladder and along both ureters was found. The pathology report described a cystic structure lined by cuboidal epithelial cells layer consist with cystitis cystica and ureteritis cystica. In this condition no active treatment is required.

Keywords: cystitis cystica, Ureteritis Cystica, bilateral obstruction, hydronephrosis.

1. INTRODUCTION

Cystitis cystica and ureteritis cystica considered as a rare, benign condition of the mucous membrane of the genitourinary tract consisting of multiple, small submucosalcysts (Wong-You–Cheong et al., 2006). The etiology of the disease is not known, but it is associated with chronic urothelial irritation that can be caused by urolithiasis or urinary tract infections. Although it's a very rare condition and it is typically diagnosed incidentally while looking for other pathology (Harik & Toole, 2012; Potts & Calleary, 2017). In this report we describe an unusual case that presented with bilateral ureteric obstruction with concomitant cystitis cystica and ureteritis cystica.

2. CASE REPORT

A 62 years-old male known case of Diabetes Mellitus, Hypertension, Dyslipidemia, Ischemic Heart disease (IHD) post Percutaneous coronary intervention (PCI) , Inactive Hepatitis B virus (HBV), History of treated schistosomiasis infection. Patient was complaining of right flank pain with lower urinary tract symptoms (LUTS) in form of frequency, urgency and dysuria. No history of frank hematuria or fever. Clinical examination was normal except for right flank tenderness. A Computed tomography of kidneys, ureters and bladder (CT KUB) scan identified bilateral hydroureteronephrosis with bilateral high insertion ureters (Fig 1).

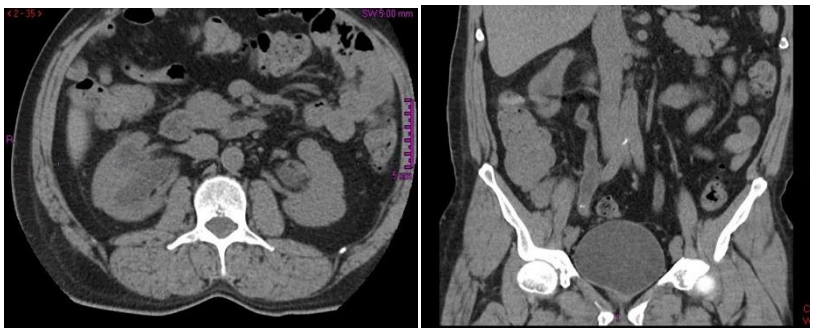

Figure 1 CTKUB Sagittal CT and coronal cross-section showing bilateral sever Hydro-Ureteronephrosis

Renal panel has shown high creatinine level 250 µmol/L (normal value 53- 106). Urine analysis identified trace red blood cells (RBCs), with evidence of Urinary tract infection. Trial of JJ stent insertion failed, then right nephrostomy Inserted. Patient referred to our hospital for further management. CT scan (KUB protocol) had done which shows right nephrostomy tube in situ, small right ureteric stone and left bladder lesion (Fig 2).

Figure 2 A coronal CTscan showing the small Right ureteric stone B Sagittal CTscan showing Left bladder lesion

Patient underwent diagnostic cystoscopy which revealed abnormal ureteric orifices locations with multiple cystic lesions offer the bladder (Fig 3). Biopsy taking and bilateral DJS inserted.

Five weeks later, patient underwent check cystoscope, bilateral ureteroscope, stone extraction, and bilateral DJS exchange. Intraoperative findings showed multiple polypoid like lesions along the ureters and both ureteric orifices. Biopsy taking and laser fulguration was applied (fig 4). Histopathology revealed ureteritits cystica marker, serum creatinine level of 136 µmol/L. Patient was in regular Follow up.

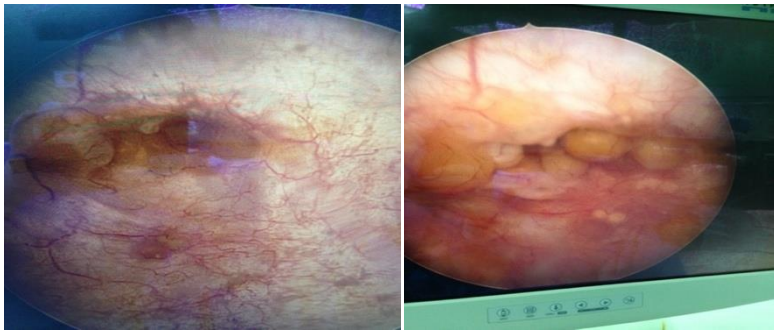

Figure 3 intraoperative findings: cystoscopy showed multiple cystic lesions involving both ureteric orifices.

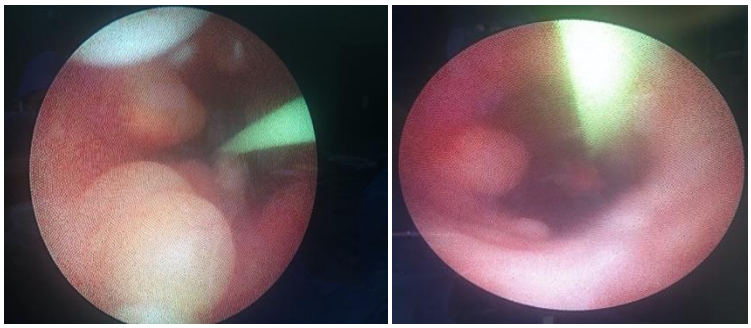

Figure 4 intraoperative findings: ureteroscopy showed multiple cystic lesions along the ureter

3. DISCUSSION

Cystitis cystica consider benign chronic inflammatory reaction assume to be caused by chronic irritation of the bladder urothelium due to infection, stones, chronic obstruction, or tumor1, which is a common finding in normal bladder (Wong-You Cheong et al., 2006; Harik & Toole, 2012). Cystitis cystica is benign condition defined as hyperproliferative status where issued to be immune system response to a chronic inflammatory stimulus which represent pathologically by initial submucosal masses of epithelial cells called 'von Brunns nests (Potts & Calleary, 2017). Both cystitis and Ureteritiscystica are formed by degeneration of the central cells of the epithelial cell nest which is benign in nature (Morse, 1928). The cystically dilated von Brunn nests within the lamina propria undergo cavitation to form fluid-filled cystic structures of mucoproteinacous (Wong-You–Cheong et al., 2006).

Histological exam Ureteritis cystica composed of multiple of small cystic degeneration of metaplastic epithelium or submucosal Brunn cell nests 6 this condition has been associated with recurrent urinary tract infection (UTI) (Wong-You–Cheong et al., 2006; Potts & Calleary, 2017). Cystitis cystica predominantly occurs at the bladder neck and trigone region of the bladder (Morse, 1928). Clinically the major forms may be misdiagnosed for malignant bladder tumor on cystoscopy, so histopathology examination is fundamental, in other hand its minor forms which common presented as mild clinical features as cystitis. Urinary tract infection, Hematuria and LUTs are the usual presenting feature of cystitis cystic; however, some patients can be asymptomatic (Raja et al., 2003; Wiener et al., 1979). The incidence of Cystitis cystica varies with age and higher in male's gender (Wong-You–Cheong et al., 2006; Harik & Toole, 2012).

In Literature review the potential of cystitis cystica as premalignant precursor for bladder cancer still debut. Although there are limited literature reports that linked cystitis cystica to being risk for developing bladder cancer as pre-malignant potential lesion, Harik and 'Toole had consider it precancerous for progression to adenocarcinoma of bladder (Harik & Toole, 2012).

The cystitis cystica prevalence estimated around 60 % in normal bladder at autopsy as reported (Wiener et al., 1979). These results suggested the cystitis cystica and less common urteritis cystica may be a normal histological variant of bladder urothelium with no pre-malignant potentials (Harik & Toole, 2012; Potts & Calleary, 2017).

4. CONCLUSION

In this case, unusual presentation of multiple bladder lesions involving both ureteric orifices which lead to bilateral ureteric obstruction was associated with renal impairment. Histopathology exam result was cystitis cystica and Uretreritis cystica; however, this condition is benign and surveillance follow up is highly recommended.

Funding
This study has not received any external funding.

Conflict of interest
The authors declare that there are no conflicts of interest.

Informed consent
Written & Oral informed consent was obtained from the participant in the study.

Data and materials availability
All data associated with this study are present in the paper.

REFERENCES AND NOTES

1. Harik LR, O'Toole KM. Nonneoplastic lesions of the prostate and bladder. Archives of patho & lab med. 2012; 136(7):721-34.
2. Morse HD. The etiology and pathology of pyelitiscystica, ureteritiscystica and cystitis cystica. The Americ J of path. 1928; 4(1):33.
3. Potts S, Calleary J. Cystitis cystica as a large solitary bladder cyst. J of Endouro Case Reports. 2017; 3(1):34-8.
4. Raja J, Anson K, Patel U. Cystitis cystica and cystitis glandularis—Presentation with acute ureteric obstruction. Clin Radio Extra. 2003; 58(6):43-4.
5. Wiener DP, Koss LG, Sablay B, Freed SZ. The prevalence and significance of Brunn's nests, cystitis cystica and squamous metaplasia in normal bladders. J of Uro. 1979; 122(3):317-21.
6. Wong-You–Cheong JJ, Woodward PJ, Manning MA, Sesterhenn IA. Neoplasms of the urinary bladder: radiologic-pathologic correlation. Radiograph 2006; 26(2):553-80.

Peer-review
External peer-review was done through double-blind method.

Article History
Received: 08 December 2020
Reviewed & Revised: 09/December/2020 *to* 08/January/2021
Accepted: 09 January 2021
E-publication: 15 January 2021
P-Publication: January 2021

General Note
We recommended authors to print article as color digital version in recycled paper. Discovery Scientific Society will not provide any prints for subscription.