International Journal of
Recent Innovations in Medicine and Clinical Research
Open Access, Peer Reviewed, Abstracted and Indexed Journal

ISSN: 2582-1075
https://ijrimcr.com/
Volume-2, Issue-4, 2020: 97-100

Case Report

Incidental Finding of Ureterocele in an Adult Female Presenting with Lower Abdominal Pain and Urinary Incontinence [Role of Imaging]: A Case Report

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Received: October 29, 2020 **Accepted:** November 18, 2020 **Published:** November 26, 2020

Abstract: Ureterocele is a cystic dilatation of the terminal portion of the ureter that is located inside the bladder wall or the urethra or both. It occurs with varying frequency and has a higher incidence in female with a male to female ration of 1:6. The variable clinical presentation may include loin pain, lower abdominal pain, urinary tract infection, heamaturia, urinary incontinence or retention. We present a case of adult ureterocele misdiagnosed as pelvic inflammatory disease (PID) so as highlight the role of imaging in effective management of Acute Gyneacological emergency.
Keywords: Ureterocele, Lower Abdominal Pain, Urinary Incontinence, Incidental Finding.

Introduction

Ureterocele is a cystic dilatation of the terminal portion of the ureter that is located inside the bladder wall or the urethra or both [1]. It occurs with varying frequency and has a higher incidence in female with a male to female ration of 1:6 [2]. The variable clinical presentation may include loin pain, lower abdominal pain, urinary tract infection, heamaturia, urinary incontinence or retention [3]. We present a case of adult ureterocele misdiagnosed as pelvic inflammatory disease (PID).

Case Report

A 29-year old house wife who presented with 3 years history of intermittent lower abdominal pain that is sometimes associated with lower grade fever. She had no dysuria, heamaturia or vaginal discharge. She was misdiagnosed for pelvic inflammatory disease and had several course of antibiotic and analgesic with temporary relief. She was referred to Radiology Department, from UDUTH general outpatient department (GOPD) for an abdominal ultrasound.

On physical examination she was afebrile, anicteric, acyanosed, not dehydrated, no pedal edema. Not in obvious respiratory distress. Chest and neurological examination were essentially within normal limits. Laboratory findings shows protein and some pus cell in the urinalysis result, however the EUCR, FBC and ESR are within normal range. Trans-abdominal ultrasound showed a small oval anechoic lesion with a smooth well circumscribed echogenic margin within the urinary bladder on the left side on a transverse scan and appears tubular structure within the moderately filled urinary bladder on a longitudinal scan (Figure 1). No back pressure effect on the kidneys and ureters bilaterally. An impression of non-obstructed ureterocele was made and subsequently intravenous urography confirms the diagnosis with evidence by the "cobra" head appearance of ureterocele (Figure 2). The patient was then referred to the urology unit where she had endoscopic incision of the lesion and was later placed on antibiotic and analgesic and subsequently was discharged. She has done well post operatively.

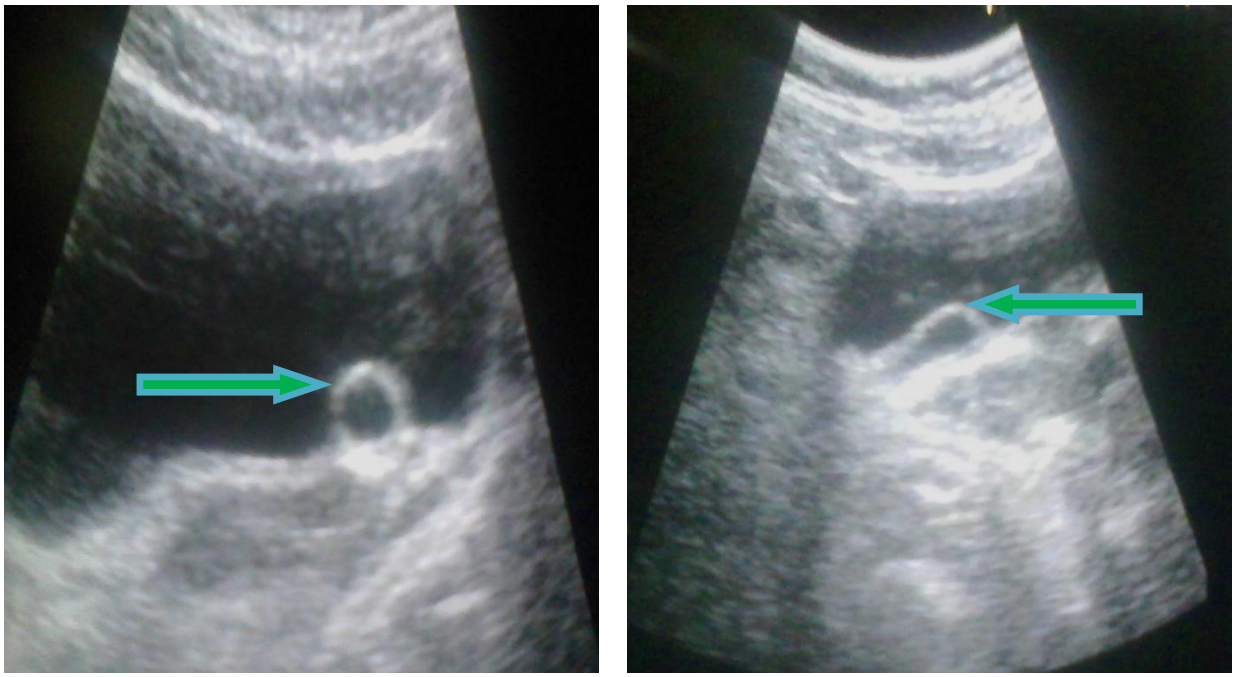

Figure 1. Ultrasonogram showing a small oval anechoic lesion with well circumscribed echogenic margin that measure 18x19mm in size within the urinary bladder in the left side on a transverse scan (Long arrow) and appear tubular on a longitudinal scan (arrow head).

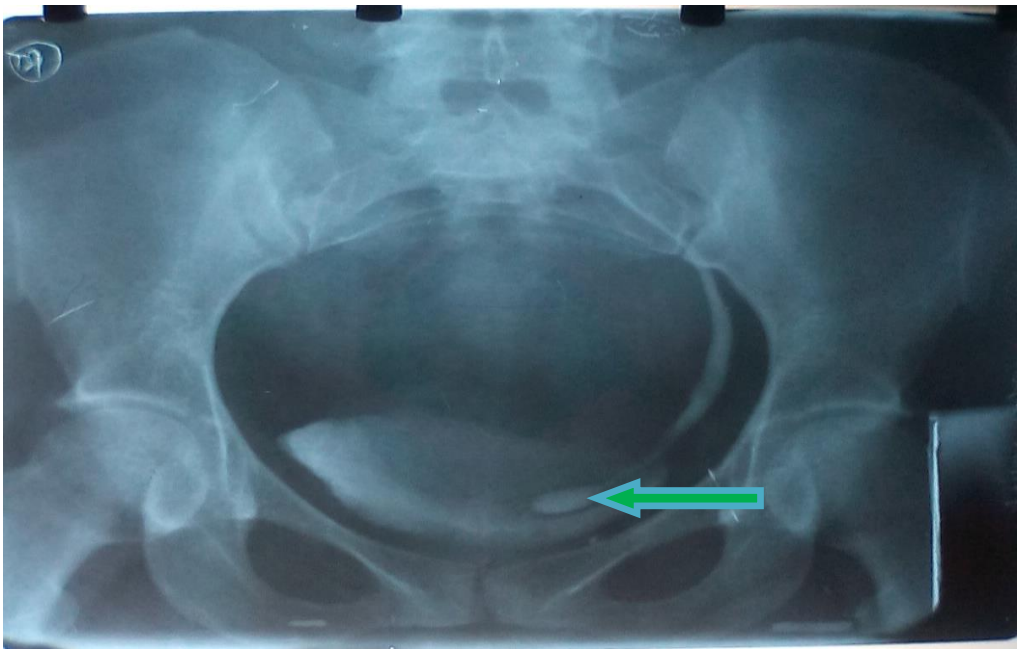

Figure 2. Intravenous urography showing bulbous distal ureteric dilatation with surrounding lucent areas with the opacified urinary bladder giving the so called cobra head appearance of ureterocele (arrow). The image on the left showed no dilatation of the calyceal system. The distal left ureter is prominent.

Discussion

The diagnosis of ureterocele is usually radiological [4]. Ureterocele is classified as simple or duplex system and acquired or congenital [5]. The simple or the acquired types are commonly seen in adult [6]. These are usually less prone to obstruction and renal dysplasia is associated with duplicated system [5, 6]. It is unilateral in 80% of cases and bilateral in 10% of cases [7]. Adult ureterocele has diverse clinical presentation, therefore diagnosis should be suspected in a variety of situation.

Typical clinical findings like voiding problems and flank pain as well as uncharacteristic discomfort in the lower abdomen and pelvic pain may lead to the diagnosis of an ureterocele [8]. Lack of suspicion by the clinician and inadequate radiological work up of patient could lead to failed diagnosis [2, 3] as in our case that was misdiagnosed as pelvic inflammatory disease (PID).

It seems probable that ureterocele on a single ureter is not always congenital but may be acquired. Inflammation or trauma, narrowing the uretral orifice, could result in ureteral prolapsed into the bladder lumen [9]. Most often they are incidental findings and required no treatment [8]. However, adult ureterocele which are non-obstructive and non-refluxing, do not require specific therapy [10].

The study of urinary tract anatomy and pathology in patients can be obtained by a number of imaging methods. Ultrasonography represents the main screening technique, but rarely does it enable an accurate analysis of the entire urinary tract [11]. Other diagnostic methods such as voiding Urethrocystography, excretory urography may compliment the diagnosis, but have the disadvantage of exposing the patient to ionizing radiation [12].

Atypical radiographic finding of ureterocele is the "Cobra head" showing single dilatation of the distal ureter that insert in a normal position into the trigone of the bladder [13]. Cobra head ureterocele are not uncommon findings on routine intravenous urography [8, 13]. A "spring onion" deformity with peripheral halo appearance of the protruding ureter in the bladder is characteristic [5, 13]. The diagnosis can be missed on ultrasonography probably if small size, however it is seen as a thin well defined anechoic structure with echogenic margin within the urinary bladder giving the so called cyst within cyst appearance [7].

The imaging studies provide a great deal of insight into effect of ureterocele on normal anatomy and physiology. Urinary bladder ultrasound is first line imaging study [4, 10]. Intravenous urography is useful for delineating anatomy and renal function. As ureterocele have a broad spectrum of presentation, anatomy and pathophysiology, thus management cannot be generalized. No single method suffices for all the cases [2, 7].

Conclusion

We presented an adult female, A 29 year old house wife with, Ureterocele who presented with recurrent symptoms of lower abdominal pains and urinary incontinence for 3 years that was misdiagnosed and being managed as a case of Chronic Pelvic Inflammatory Disease [PID] prior to radiological investigation.

Conflicts of interest: None declared.

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Citation: Danfulani M, Musa A, Gele IH, Sule MB, Aliyu S. Incidental Finding of Ureterocele in an Adult Female Presenting With Lower Abdominal Pain and Urinary Incontinence [Role of Imaging]: A Case Report. Int J Rec Innov Med Clin Res. 2020;2(4):97-100.