

Case Report

A Case of Mickey Mouse Bladder

Shree Varshini T^{1*}, Syedha Fariheen Fathima¹, Kalaichezhian Mariappan I², Prabakaran Maduraimuthu³

¹MBBS, Department of Radiodiagnosis, Sree Balaji Medical College and Hospital, Chennai, Tamilnadu, India

²MD Radiodiagnosis, Department of Radiodiagnosis, Sree Balaji Medical College and Hospital, Chennai, Tamilnadu, India

³MD Radiodiagnosis, Diploma in Medical Radiodiagnosis (DMRD), Department of Radiodiagnosis, Sree Balaji Medical College and Hospital, Chennai, Tamilnadu, India

Article History

Received: 14.08.2021

Accepted: 19.09.2021

Published: 21.09.2021

Journal homepage:

<https://www.easpublisher.com>

Quick Response Code



Abstract: The pelvic “Mickey Mouse” sign is created by bilateral inguinal hernias containing either portion of bladder or even as an isolated content which is seen on imaging. The “hutch diverticula” showing Mickey Mouse appearance is a congenital bladder diverticula noted at the vesicoureteric junction due to detrusor muscle weakness. Inguinal hernias may rarely have bladder as its content, but being sole component is uncommon [1]. Urinary bladder hernias usually affect elderly, obese males. Symptoms depend on degree of the bladder involvement and its important to evaluate such conditions to avoid bladder injury and treat (LUTS) lower urinary tract symptoms [2].

Key words: Bilateral, bladder, scrotum, diverticula, inguinal hernia.

Copyright © 2021 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution **4.0 International License (CC BY-NC 4.0)** which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Bladder involvement in inguinal hernias is only 4% and can also be seen as a component in various hernias like ischio-rectal, femoral and obturator. Inguinal hernias may have portions of bladder participate but having entire bladder as content is very rare. Patients may be asymptomatic [3] and are incidentally found on imaging. Ultrasound, CECT, MRI and Urographic studies are done to detect bladder herniation. Patients may also present with inguinoscrotal swelling which reduces after voiding. Sometimes two-stage micturition may be reported, in which second micturition is done by compressing the swelling externally called Mery's syndrome.

CASE PRESENTATION

A 50-year-old gentleman presented with dull right flank pain since three months. There was no lower urinary tract symptoms (LUTS), urinary retention, urinary incontinence, weight loss or hematuria. Physical examination did not show any significant abnormality. Contrast enhanced computed tomogram (CECT) was done and showed bilateral inguinal hernias with anteroinferior protrusion of bladder seen as two fluid filled out pouching on either sides connecting with the

rest of bladder. It's best seen on axial section and can be confirmed with coronal and Sagittal images. This mimics the Mickey Mouse appearance formed by bilateral bladder herniation as ears and remaining bladder as face.



DISCUSSION

Hutch diverticula (HD) is a rare congenital urinary bladder diverticula seen near vesicoureteral

junction either in the absence of posterior urethral valves or neurogenic bladder. It is due to herniation of bladder mucosa through the weak detrusor muscle present anterolateral to ureteral orifice. The component of inguinal hernias can be a portion of bladder or even the entire bladder may involve called massive inguinoscrotal hernia which is uncommon. Only 1-4% of inguinal hernia contains bladder as one of its component [4]. Inguinal vesical hernia can be unilateral or bilateral. The space between Intravesical ureter and bladder's muscle layer is covered by waldeyer sheath and any defect in this normal musculature results in hutch diverticulum. Though the wall of diverticulum is thin, it contains bladder mucosa, adventitia and muscle. Commonly the condition affects elderly, obese males. Predominantly patients are asymptomatic and are incidentally detected but sometimes they present with inguinoscrotal swelling that reduces after voiding. However certain patients may encounter lower urinary tract symptoms, urinary retention and incontinence due to obstruction by urethral orifice compression. Rarely two stage micturition [5] called Mery's syndrome is reported, where second micturition is done by compressing the swelling. As a normal variant in infants where the bladder protruding on lateral aspects seen as bladder ears may be misinterpreted with bladder diverticula. Predisposing factors include decreased bladder tone, trauma, obesity, weak pelvic floor, lax abdominal wall, pelvic mass lesions, hernia repair and history of LUTS.

The investigation of choice will be voiding cystourethrogram [6] taken in anteroposterior, lateral and oblique views done to demonstrate the diverticula in terms of vesicoureteric reflux, neck of bladder and urethral anatomy. Urographic studies reveal inferolateral protrusion of bladder wall having round wide mouthed appearance. Other findings are also noted like lateral ureteral displacement, incompletely visualised bladder base and small bladder volume.

Ultrasonography shows two oval or round anechoic fluid filled outpouchings towards the bladder base near vesicoureteric junction of varying sizes. Valsalva maneuver increases the yield of usg finding. CT IVU is done to better evaluate the local anatomy and its relation with lower end of ureter. CECT and MRI is done for detecting the bladder hernias and its complications. They are used to view the position of herniation such that the bladder directed towards hernia and base of bladder anteroinferiorly angulated. Cystoscopy is an invasive procedure done before surgery to assess size of diverticulum, find any

pathology within the diverticulum like malignancy, stone, ureteric orifice relation to diverticula, anatomy of bladder neck and urethra relating the herniation.

Only 7% of bladder hernias are preoperatively diagnosed, 16% found post operatively with complications and the rest intraoperatively. Small asymptomatic diverticula are managed conservatively while conditions like giant ones, diverticula rupture, bladder outlet or ureteral obstruction, difficulty in bladder emptying, pathology like stone or tumour in diverticula [7] are taken up for surgery.

CONCLUSION

Bilateral inguinal hernias with bladder involvement called hutch diverticulum gives Mickey Mouse appearance on imaging. These are very rare and incidentally detected as patients are asymptomatic. Most commonly affected males, obese and elderly people. Smaller herniations are to be managed conservatively and giant diverticulum with complications are of clinicians concern and need surgery.

REFERENCES

1. Indiran, V. (2016). Bilateral inguinal hernia containing urinary bladder as sole content with "Pelvic Mickey Mouse Sign". *Urology*, 90, e5-e6.
2. Sagar, A., Sabharwal, S., & Kekre, N. S. (2013). Bilateral vesical inguinal hernia: A perineal 'Mickey mouse'. *Indian Journal of Urology*, 29(2), 154-155.
3. Kim, K. H., Kim, M. U., Jeong, W. J., Lee, Y. S., Kim, K. H., Park, K. K., ... & Lee, S. H. (2011). Incidentally detected inguinoscrotal bladder hernia. *Korean journal of urology*, 52(1), 71-73.
4. Branchu, B., Renard, Y., Larre, S., & Leon, P. (2018). Diagnosis and treatment of inguinal hernia of the bladder: a systematic review of the past 10 years. *Turkish journal of urology*, 44(5), 384-388.
5. Bacigalupo, L. E., Bertolotto, M., Barbiera, F., Pavlica, P., Lagalla, R., Mucelli, R. S. P., & Derchi, L. E. (2005). Imaging of urinary bladder hernias. *American Journal of Roentgenology*, 184(2), 546-551.
6. Westera, J., Meyer, J., Reynolds, J., & Lambrianides, A. L. (2012). Massive inguinoscrotal bladder hernia. *Journal of surgical case reports*, 2012(5), 5-5.
7. Leshchinskiy, S., & Akselrod, D. (2018). The bladder ear. *Abdom Radiol*, 43, 2198-2199.

Cite This Article: Shree Varshini T et al (2021). A Case of Mickey Mouse Bladder. *EAS J Radiol Imaging Technol*, 3(5), 244-245.