

Enterovesical Fistula due to Primary Intestinal Lymphoma

Kirti Rana, Samrat Chatterjee, Manjeet Kumar, Girish Kumar Sharma, Pamposh Raina and Kailash Chander Barwal*

Department of Urology, Indira Gandhi Medical College, Shimla, Himachal Pradesh, India

*Corresponding Author: Kailash Chander Barwal, Department of Urology, Indira Gandhi Medical College, Shimla, Himachal Pradesh, India.

Received: May 05, 2020; Published: May 23, 2020

Abstract

Enterovesical fistula due to primary small intestinal non-Hodgkin lymphoma is an uncommon occurrence and only few cases have been reported. It presents with predominant lower urinary tract symptoms. Diagnosis is mainly clinical; although cystoscopy, CT cystography and colonoscopy may identify the anatomical site of fistula. Surgery plus chemotherapy are the preferred treatment options; however in case of small fistula, chemotherapy alone may heal the fistula.

Authors present a case of 58 years woman, who presented with pneumaturia, fecaluria and recurrent lower urinary tract symptoms. Clinical suspicion of enterovesical fistula was confirmed on cystoscopy and CT cystography. Right hemicolectomy and partial cystectomy were done for her. She had an uneventful recovery. Histopathology and immunohistochemistry suggested Diffuse large cell B cell Lymphoma. She was advised adjuvant chemotherapy and follow up.

Keywords: Enterovesical Fistula; Non-Hodgkin Lymphoma; CT Cystography

Introduction

Enterovesical fistula (EVF) is an abnormal connection between the intestine and bladder. Depending upon location, it may be ileovesical, colovesical, rectovesical or appendicovesical. Only few cases of EVF due to small intestinal lymphoma have been reported [1]. EVF has been reported also in patients undergoing chemotherapy for intestinal lymphoma [2].

Non-Hodgkin Lymphoma (NHL) is the third most common primary small intestinal neoplasm [3]. Primary gastrointestinal NHL accounts for 10 - 15% of all NHL patients and 20 - 40% of extranodal NHL patients [4]. The small intestine is the second most frequent site for Primary gastrointestinal non-Hodgkin lymphoma with lesion located most frequently in the terminal ileum. Diffuse large B-cell lymphoma (DLBCL) is a common histological variant [5].

Chemotherapy incorporating rituximab-cyclophosphamide-oxycodone-prednisolone is the standard regimen for small intestinal DLBCLs. Surgery is reserved for complications i.e. haemorrhage, perforation, obstruction [6].

Case Description

58 years post-menopausal female was admitted with chief complaints of pneumaturia, dysuria, fecaluria, loss of appetite and significant weight loss in last six months. She had history of ATT intake one year back for gastrointestinal tuberculosis. Per abdomen and Digital rectal examinations were equivocal. Blood investigations were within normal limits. Urine microscopy revealed large number of pus cells whereas urine culture showed mixed growth. Ultrasonography abdomen and KUB region was normal and Colonoscopy did not reveal any colorectal lesion. Cystoscopy visualized two ulcerative lesions with solid base and raised margins, each of size of about 2.5 x 3.0 cms at the dome of urinary bladder. Both ureteric orifices were normal and there was no other fistulous opening in the bladder.

CECT abdomen revealed narrowing of distal ileum along with a homogeneously enhancing soft tissue mass in the bladder. The bladder mass had both extra luminal and intra luminal components. CT Cystography delineated a fistulous communication between the dome of urinary bladder and distal ileum (Figure 1).

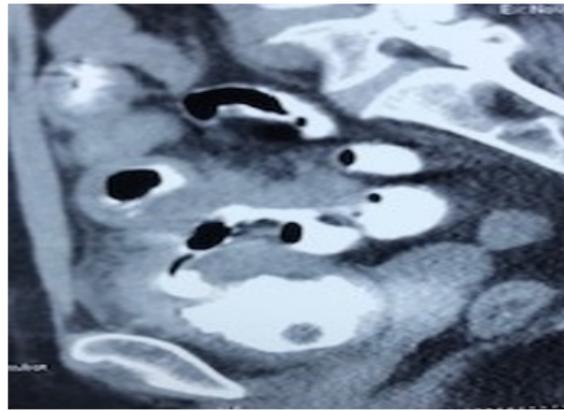


Figure 1: CT urography-sagittal image delineating enterovesical fistula.

Laparotomy was done via lower mid-line incision. An exophytic mass of size 5 x 4 cms arising from distal ileum had infiltrated into the dome of urinary bladder and had led to single, 2 x 2 cms sized fistulous communication between them. Partial cystectomy was done with two cms tumor free resection margin and Bladder was repaired in two layers over a three way 22fr Foley's catheter. Standard Right hemicolectomy was done for distal ileal mass (Figure 2).



Figure 2: Right hemicolectomy specimen showing resected enterovesical fistula arising from exophytic mass in distal ileum.

Post-operative recovery was uneventful. While abdominal Drain was removed on day 5, urethral catheter was removed on post day 21. Patient voided normally upon catheter removal.

Histopathological examination and Immunohistochemistry suggested high grade B cell non-Hodgkin's lymphoma.

Patient was advised adjuvant chemotherapy. At follow up after 3 months, she was asymptomatic.

Discussion

Commonest conditions giving rise to EVF are diverticulitis, colonic cancer and crohns disease. Less commonly, it may be due to radiation, infection and trauma. Men are affected twice: uterus and broad ligament act as protective barrier in women. The peak incidence is between 55 and 65 years. EVF present with predominant lower urinary tract symptoms i.e. pneumaturia, frequency, urgency, suprapubic pain, recurrent urinary tract infections,, hematuria and fecaluria. One classic presentation of EVF is Gouverneur syndrome and consists of suprapubic pain, urinary frequency, dysuria and tenesmus [7].

Diagnosis of EVF is made on clinical grounds. Urine microscopy shows pyuria with or without hematuria. Urine cultures are positive with mixed bacterial growths. Cystoscopy is the most common abnormal investigation. It's identification rates range from 10% to 60% but upto 90% cystoscopies show indirect evidence of EVF i.e. bullous edema and inflammation of bladder wall. Colonoscopy rarely identifies a fistula tract but gives an idea about the etiology and extent of intestinal disease. CT with oral and i.v. contrast has diagnostic accuracy as high as 90% to 100%. The triad of findings on CT that are suspicious for colovesical fistulae consists of (1) bladder wall thickening adjacent to thickened bowel loop (2) air inside bladder (in the absence of previous urinary tract manipulation) (3) presence of colonic diverticula [7]. CT cystography gives a three-dimensional view of fistula tract.

Functional studies i.e. charcoal test, urinary or rectal visualization of administered dyes, poppy seed test and Bourne test are seldom performed as they do not provide anatomical detail of EVF [8].

Most cases are addressed surgically. The principles of surgical management are (1) removal of fistula tract (2) removal of diseased segment of intestine with or without proximal diversion. One stage approach is associated with fewer complications and lower mortality although in the settings of locoregional sepsis, prior radiation or intestinal obstruction, two stage approach is safer. It is advisable to interpose omental or peritoneal flap between bowel and bladder repairs. The overall complication rate from EVF repair is 6% to 49% [8].

Conclusion

To conclude, EVF due to primary intestinal NHL is very rare. It presents with predominant lower urinary tract symptoms and is diagnosed on history, cystoscopy and contrast CT. Surgery must be followed by adjuvant chemotherapy.

Conflict of Interest

None.

Bibliography

1. Shinji S., *et al.* "Enterovesical fistula caused by non-Hodgkin's lymphoma of the ileum: report of a case". *Surgery Today* 42.10 (2012): 1005-1009.
2. Lee YT, *et al.* "Enterovesical fistula caused by regressive change of non-Hodgkin's lymphoma: A case report". *Oncology Letters* 12.1 (2016): 331-333.
3. Gill SS, *et al.* "Small intestinal neoplasms". *Journal of Clinical Gastroenterology* 33.4 (2001): 267-282.
4. Herrington LJ, *et al.* "The incidence of non hodgkins lymphoma and histological subtypes in Asian migrants to the united states and their descendents". *Cancer Causes Control* 7.2 (1996): 224-230.
5. Olszewska-Szopa M and Wróbel T. "Gastrointestinal non-Hodgkin lymphomas". *Advances in Clinical and Experimental Medicine* 28.8 (2019): 1119-1124.

6. Anderson JR., *et al.* "Epidemiology of the non hodgkins lymphomas: Distribution of the major subtypes differ by geographic locations. Non-Hodgkin's lymphoma classification project". *Annals of Oncology* 9.7 (1997): 717-720.
7. Eric S Rovner. "Urinary Tract Fistulae". In: Wein, Kavoussi, Novick, Partin, Peters (eds) *Campbell-Walsh Urology*, 10th edition. Elsevier Saunders (2012): 2252-2254.
8. Ryan L Mori., *et al.* "Intestinourinary Fistulas". In: Thomas E Keane, Sam D Graham Jr (eds) *Glenn's Urologic Surgery*, 8th edition. Wolters Kluwers (2016): 202-204.

Volume 3 Issue 6 June 2020

© All rights reserved by Kailash Chander Barwal., *et al.*