Unusual presentation of urinary ascites diagnosed by laparoscopy

V. Gaikwad, A.D. Chougale, S. Murchite, R.M. Kulkarni, J. Bagwan
Department of Surgery, Padmashri Dr D Y Patil Hospital and Research Institute, Kadamwadi, Kolhapur, India

Keywords: Urinary; ascitis; laparoscopy

Case report

A 40 year old female was referred for acute renal failure. Her chief complaints were oliguria and distension of abdomen with lower abdominal pain of three days. In the past, this patient had renal tuberculosis with right sided pyelonephritis (Positive TB polymerase chain reaction qualitative test on urine sample by DNA amplification for Mycobacterium Tuberculosis Complex, MTC) and right sided hydronephrosis with placement of a double J stent and had taken anti-tuberculosis medication for 6 months. The stent was removed 3 months later. On general examination she was anaemic, her abdomen was distended with flank fullness and there was a fluid thrill. Haematological investigation revealed a haemoglobin of 5.3 g/dl, serum urea-90 mg/dl, and serum creatinine- 4.5 mg/dl. She had normal liver biochemistry tests and normal serum electrolytes and carbohydrate antigen (CA-125) was 29.38 U/ml (Normal- 0.0-35 U/ml). Urine analysis showed pyuria and bacteriuria and ascitic fluid analysis showed 95% lymphocytosis, however, urine and ascitic fluid were negative for acid fast bacilli. An ultrasound examination showed moderate to gross ascites, gross right hydronephrosis and a thin right renal cortex with mild compensatory hypertrophy of the left kidney, and right adnexal cysts. The urinary bladder was catheterized on admission and treatment commenced for renal tuberculosis with acute renal failure. Gradually her urine output improved to about 2000ml per day. After satisfactory recovery and reduction in her abdominal girth, her urinary catheter was removed. However, in the ensuing days she developed ascitis which required repeated paracentesis. Since no definitive cause of ascitis could be ascertained a diagnostic laparoscopy was planned. Laparoscopy surprisingly revealed perforation of the urinary bladder at its dome which was comfirmed when the tip of a Foley catheter was visualized in the peritoneal cavity (Figure 1). At mini laparotomy, we found a "thimble bladder" with perforation which was closed in two layers along with right salphingo-oophorectomy which was performed for a concomitant right ovarian cyst. Post op recovery was uneventful.

Discussion

Ascites may occur due to such conditions as liver cirrhosis, tuberculous peritonitis, pyogenic peritonitis, congestive heart failure, urinary ascites, biliary ascites and pancreatic ascites. The cause for intractable ascites is often difficult to diagnose by conventional laboratory examinations and results in a diagnostic challenge for clinicians. [3, 4]

Laparoscopy as an alternative to exploratory

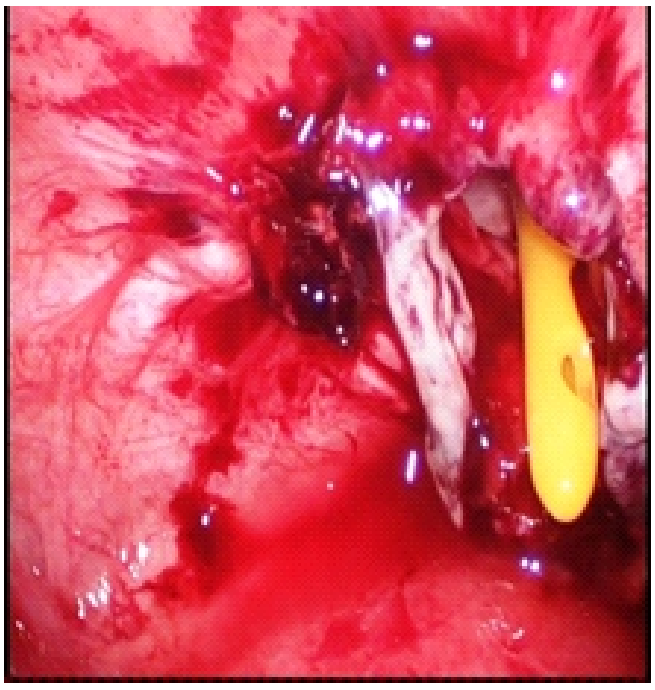

Figure 1. The tip of a Foley catheter protruding through the urinary bladder.

Correspondence: V. Gaikwad
E-mail: dr_vaishalig@yahoo.com

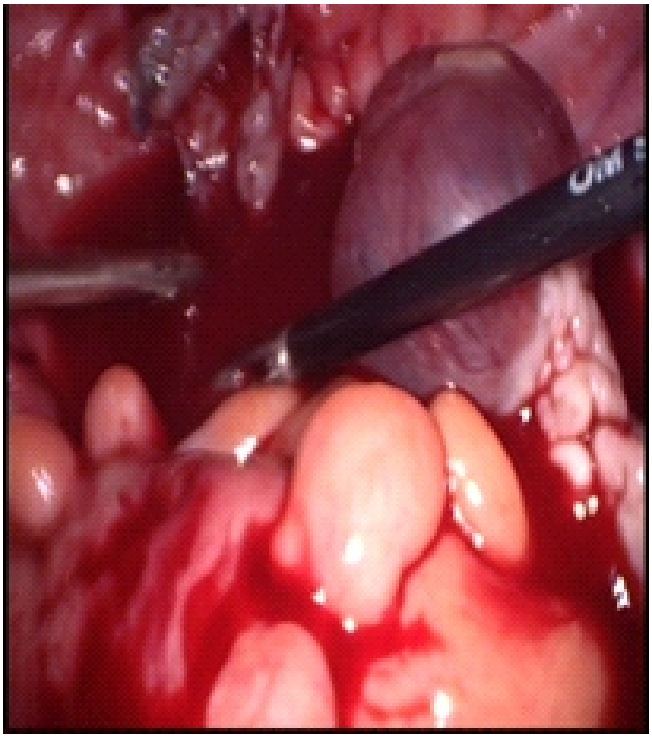

Figure 2. Urinary ascites with a right sided ovarian cyst at laparoscopy

laparotomy has been used in the past in the evaluation of ascites when the cause is unclear. In a number of cases, where the clinical picture is confusing and standard tests fail to disclose the source of the fluid collection, diagnostic laparoscopy is a reliable method. Laparoscopy may visualize peritoneal deposits of tuberculosis or tumour with the added advantage of biopsy under direct vision even in the elderly and infirm [5,6].

Conclusion

Laparoscopy is a valuable means of assessing the peritoneal cavity in patients with unexplained ascites when the primary cause remains unclear. With a careful and standardized technique of entry, complications are rare, the diagnosis can be accurately made with selective biopsy specimens and appropriate treatment can then be instituted without delay, which is particularly important in patients where diagnosis becomes difficult to made for origin of ascites.

References

1. Ho AM, Roth P, Cowan WD. Gaseous distension of the urinary bag indicating bladder perforation during laparoscopic pelvic procedures. Int J Gynecol Obstet. 1996; 55:297–8.

2. Greenberger NJ. Gastrointestinal Disorders: a Pathological Approach. 4th ed. Chicago: Year Book Medical Publishers, 1990:365-7.

3. Bender MD. Disease of the peritoneum, mesentery and diaphragm. In: Sleisenger MH, Fordtran JS, eds. Gastrointestinal Disease: Pathophysiology, Diagnosis, Management. 4th ed. Philadelphia: WB Saunders, 1989:1935-51

4. Uthman IW, Bizri AR, Shabb NS, Khury MY, Khalifeh MJ. Peritoneal sarcoidosis: case report and review of the literature. Semin Arthritis Rheum 1999; 28:351-4.

5. Roskos M, Popp MB. Laparoscopic diagnosis and management of malignant ascites. Surg Laparosc Endosc Percutan Tech 1999; 9:365-8.

6. Chu CM, Lin SM, Peng SM, Wu CS, Liaw YF. The role of laparoscopy in the evaluation of ascites of unknown origin. Gastrointest Endosc 1994; 40:285-9.

Key points:

- Laparoscopy is a valuble means of examining the peritoneal cavity. Providing a magnified view of organs and pathology.