Clinical History:

Female patient, 74 years old, 2 months of low back pain. B-ultrasonic of pelvic examination found a cystic mass in the left behind of the bladder. The patient had no frequent urination or urgency, no pyuria, or difficulty urinating. Inspection: In the left iliac fossa, a mass was found with no clear boundaries and not painful to the touch.

Imaging Findings:

CT plain examination shows that bladder volume increases significantly and has irregular shape. There is a cystic mass on the left behind the bladder which connects with the bladder, after infusion of the contrast agent into bladder; the bladder is filled with uniform contrast agent. The cystic mass and bladder are simultaneously filled with contrast agent. The cystic mass is connected with the bladder by a certain channel, the opening of diverticulum and left side of uterus is oppressed. (Fig. 1-6)
Discussion:

Bladder diverticulum is a kind of strip protrusion formed due to the defect of bladder wall muscle or abnormal arrangement of muscle fibers, which is connected to the bladder through a small pore channel; it often occurs in the bladder bottom and side wall near the ureter. It is often divided into congenital and acquired diverticula; congenital bladder diverticulum is formed from the outward protruding of detrusor muscle bundle separated from bladder wall due to the increase in the bladder inner pressure, which is the result of local weakness of bladder wall and lower urinary tract obstruction during fetal stage. Acquired bladder diverticulum often results from intrinsic or extrinsic lower urinary tract obstruction [1], such as prostate hypertrophy, lower urinary tract stenosis, tumours, calculus, etc. When diverticulum increases, the ureteral orifice will occupy the diverticulum and then reflux occurs. Micturition cystography shows that small bladder diverticulum significantly expands during urination, and its contents return into the bladder when urination is finished, and it is shown as false residual urine which is often combined with multiple infections [2, 3].

This disease might occur at any age, and more often in older men [4]. Bladder diverticulum doesn't have any clinical manifestations, or only shows as rare characteristic two-phase urination [5].

Retrograde cystography CT examination can accurately diagnose bladder diverticulum, clearly show the size, location, shape and opening of bladder diverticulum and provide accurate and detailed information for clinical practice, thus it is a simple, effective and economical method of the diagnosis of bladder diverticulum.

Differential Diagnosis List: Bladder Diverticulum, Ovarian cysts, Pelvic tumors

Final Diagnosis: Bladder Diverticulum

References:

**Description:** Bladder volume increases significantly and has irregular shape. **Origin:** Department of Radiology?University Hospital of Gansu Traditional Chinese Medicine, No. 732 Jiayuguan West Road, Lanzhou 730020, China.
Description: There is a cystic mass on the left behind the bladder which connects with the bladder, interior density is same as that of bladder, and is equal to that of water. Origin: Department of Radiology?University Hospital of Gansu Traditional Chinese Medicine, No. 732 Jiayuguan West Road, Lanzhou 730020, China.
Description: There is irregular soft tissue density ventral to the bladder is uterus, and it is oppressed by cystic mass shifted to the right. Origin: Department of Radiology?University Hospital of Gansu Traditional Chinese Medicine, No. 732 Jiayuguan West Road, Lanzhou 730020, China.
**Description:** The bladder is filled with uniform contrast agent. **Origin:** Department of Radiology?University Hospital of Gansu Traditional Chinese Medicine, No. 732 Jiayuguan West Road, Lanzhou 730020, China.
**Description:** The cystic mass and bladder are simultaneously filled by contrast agent.

**Origin:**
Department of Radiology?University Hospital of Gansu Traditional Chinese Medicine, No. 732 Jiayuguan West Road, Lanzhou 730020, China.
Description: The cystic mass is connected with the bladder by a certain channel, the opening of diverticulum. The Foley's catheter is seen within the mass is used to infuse the contrast agent into bladder and mass. Origin: Department of Radiology?University Hospital of Gansu Traditional Chinese Medicine, No. 732 Jiayuguan West Road, Lanzhou 730020, China.