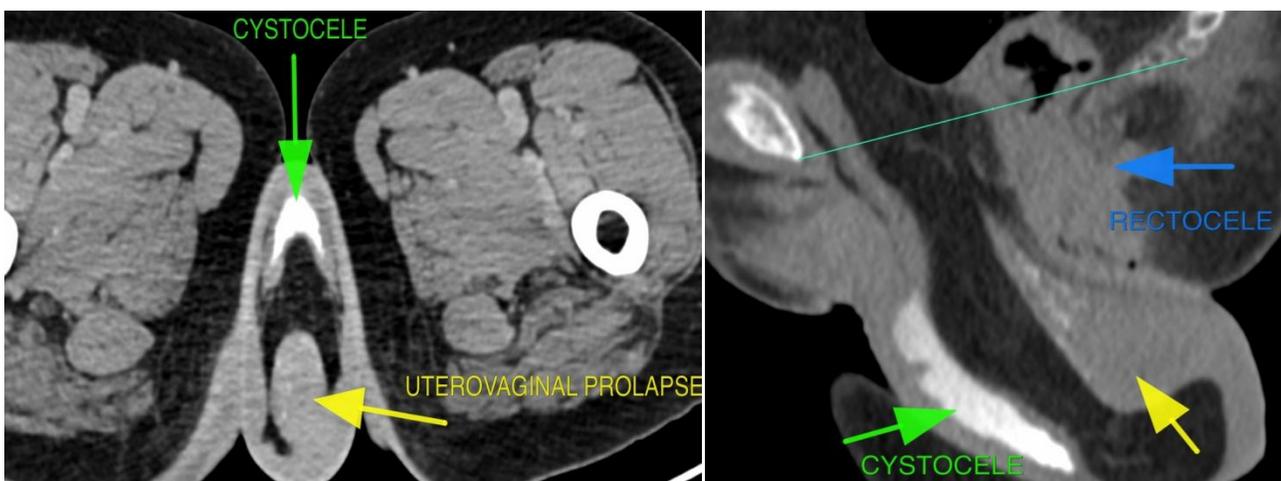


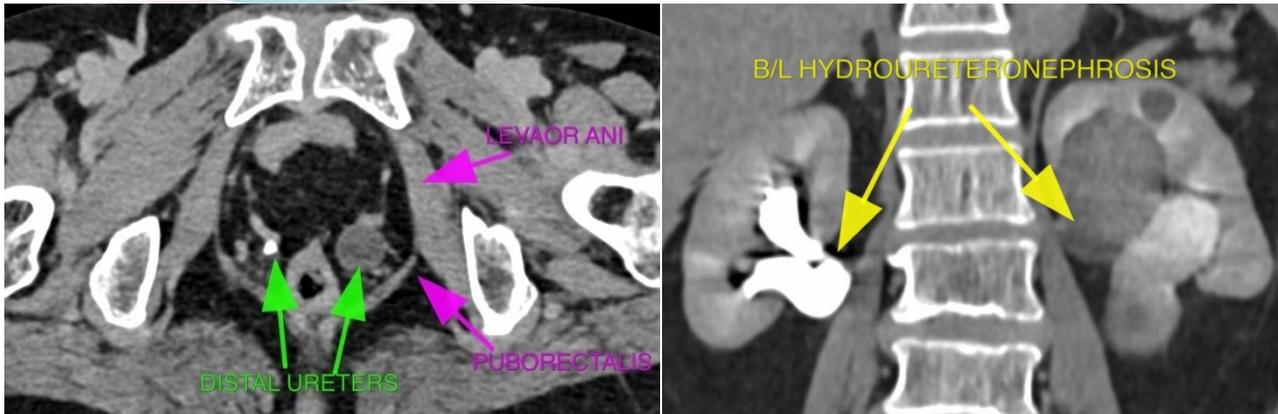
## **IMAGING IN MULTICOMPARTMENT PELVIC ORGAN PROLAPSE: CASE REPORT**

**CLINICAL DETAILS:** A 69 year old female was referred with history of mass descending per vagina and bilateral lumbar region pain since 1 month. Ultrasound examination revealed bilateral hydroureteronephrosis. Multiphasic **CT Urogram** performed to rule out distal obstruction demonstrated the following findings:

- Non-visualization of uterus in the pelvic cavity with complete prolapse of the uterus, cervix and vagina outside the introitus (yellow arrow).
- The urinary bladder showed abnormal descent with complete prolapse outside the body through relatively splayed pelvic floor muscles and levator ani. The urethral soft tissue was seen at the level of the pubic symphysis. Delayed excretory phases revealed, contrast filled abnormally low lying urinary bladder below the pubococcygeal line (Green line).
- The anal canal, mid and distal rectum also appeared low placed in relation to the pubococcygeal line/ pelvic floor.
- Prolapse of the intervening vesico-uterine pelvic fat was also noted.
- The prolapsed pelvic organs showed abnormal descent for a maximum distance of approximately 11.2cm below the pubococcygeal line.
- Moderate to gross bilateral hydroureteronephrosis was noted with abrupt narrowing of both distal ureters at the level of the pelvic floor; due to compression secondary to abnormal descent of bilateral vesico-ureteric junctions below the pubic symphysis along with the prolapsed urinary bladder.

**Imaging diagnosis of Pelvic organ Prolapse with complete Uterovaginal prolapse (Grade IV) with Cystocele and Rectocele was made; indicating global pelvic floor failure.**





**DISCUSSION:** Pelvic organ prolapsed (POP) is a common debilitating condition affecting middle-aged and elderly parous women; due to pelvic floor weakness and is associated with symptoms and signs which include pelvic pressure, protrusion of tissue through the pelvic floor or uterine prolapse, stress incontinence, constipation and incomplete defecation. The risk factors for pelvic floor weakness include elderly age, multiparity, menopause, and obesity.

**Anatomy:** The female pelvic floor can be divided into three compartments: the anterior containing the bladder and urethra, the middle containing the vagina, and the posterior containing rectum. Each of these compartments is supported by the endopelvic fascia and levator ani muscle. The two vital components of the levator ani; are the iliococcygeal and puborectal muscles. The pelvic organs are also supported by a series of fascial condensations called ligaments, which include parametrium, uterosacral ligaments and paracolpium which support the uterus and vagina. The pubocervical fascia extends from the anterior vaginal wall to the pubis and supports the bladder. The posterior vaginal wall and rectovaginal fascia support the rectum and prevent formation of an enterocele or rectocele.

Normal imaging appearance of the pelvic floor in healthy, continent women; demonstrates the bladder neck, vaginal fornices and anorectal junction all at or above the pubococcygeal line. This line extends from the inferior border of the pubic symphysis to the last joint of the coccyx and represents the level of the pelvic floor. In a symptomatic patient, organ descent of greater than 1 cm below the pubococcygeal line indicates pelvic floor laxity, and organ descent greater than 2 cm is often indicative of the need for surgical intervention.

**Imaging:** Fluoroscopy, ultrasonography, CT and MR imaging can demonstrate prolapse. MRI has shown promising results in depiction of pelvic floor anatomy and organ prolapse. Demonstration of POP and muscular pelvic floor abnormalities is feasible with CT which can be used as an alternative diagnostic tool. Imaging during strain is suggested to improve detection. In women with symptoms of multicompartiment involvement for whom a complex repair is planned or who have undergone previous repairs, imaging can be a useful preoperative planning tool.

Regards,

**Dr. Poonam P. Hegde/ Dr. Deepa S. Nadkarni**

N.B: For any queries/suggestions / feedback write to us at [radiancediagnostics.in](mailto:radiancediagnostics.in). This article can also be accessed anytime online at VIEWBOX at [www.radiancediagnostics.in](http://www.radiancediagnostics.in)