



## Case Study

### Gartner Cyst Masquerading as Cystocele

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#### ABSTRACT

Gartner cysts are the remnants of the Wolffian duct and they are rarely encountered in adulthood. They may be large enough to be mistaken for other structures such as a cystocele or urethral diverticulum. We report a female with uterocervical descent with a huge Gartner cyst, which was originally misdiagnosed as a cystocele. Ultrasonography (USG) and intravenous pyelography (IVP) revealed independence of the cyst from the lower urinary tract.

**Keywords:** Gartner cysts, Wolffian duct, Ultrasonography.

#### 1. CASE

A 40 year old P5L5 woman who had history of something coming out of her introitus following her last childbirth five years back presented to our outpatient clinic. Her menstrual cycles were regular and all her previous deliveries were through vaginal route. She had difficulty in initiating micturition and had to strain to achieve the same. There were no other associated complaints. On examination a cystic lump of about 10 x 10 cm was seen protruding through the introitus and obscuring the urethral meatus. The antero-superior margin of the lump could not be visualized. She had lax introitus with deficient perineum with third degree uterocervical descent and a small rectocele

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appreciated posteriorly. On per vaginal examination uterus was found retroverted, normal sized and fornices were free. With a provisional diagnosis of third degree uterocervical descent with a big cystocele and rectocele, the patient was investigated and posted for vaginal hysterectomy with pelvic floor repair. Her USG reported her uterus, adnexa and bilateral kidneys to be normal. Her IVP was reported normal. Under anaesthesia, relaxation of pelvic muscles facilitated further delineation of the lump and catheterization of the bladder after clearly visualizing the meatus. There was no diminution in the size of the lump on emptying the bladder. On pulling the cervix down the upper margin of the lump was clearly appreciated. The lump was found to be arising from the anterolateral part of the vagina and in close proximity of the fornix. There was no cystocele or urethrocele. Since the USG and IVP reported a normal urinary system, vaginal hysterectomy was performed with easy separation of bladder tissue from anterior vaginal wall along with the cyst. Histopathology was consistent with that of a gartner cyst.

## 2. DISCUSSION

The differential diagnoses of a mass protruding through the introitus include cystocele, urethrocele, rectocele enterocele, Bartholin cyst, Mullerian cyst and Gartner cyst. Gartner cysts comprise approximately 10% of benign vaginal cysts and are located along the lateral wall of the vagina.<sup>[1, 2]</sup>



**Fig 1: Huge cyst obscuring the urethral meatus**



**Fig 2: Under anaesthesia the uterocervical descent and the cyst margins become more clearly delineated.**



**Fig 3: There is no cystocele and the cyst is pulled down to facilitated catheterization.**



**Fig 4: There is no diminution in size of the cyst on emptying the bladder indicating the independence of the cyst from the urinary system.**



**Fig 5: Vaginal hysterectomy is performed with easy dissection of bladder tissue and removal of the Gartner cyst.**

During the eighth week of embryologic development, the paired Müllerian ducts fuse distally and develop into the uterus, cervix and upper vagina, which are lined by a pseudostratified columnar epithelium<sup>1, 2</sup> Wolffian ducts normally regress in the female, and their remnants include Gartner duct, epoöphoron and paroöphoron.<sup>2</sup> The Gartner duct is the remnant of the vaginal portion of the Wolffian duct which becomes dilated by the secretions from the persistent glandular

epithelium and is commonly found along the anterolateral wall of the proximal third of the vagina.<sup>3</sup> On the contrary Bartholin cysts are found in the posterolateral wall of the inferior third of the vagina associated with the labia majora.<sup>3</sup> Typically Gartner's duct cysts are small with an average diameter of 2 cm but may be enlarged to the extent of being mistaken for other structures, such as a cystocele or urethral diverticulum as seen in the present case. Gartner duct cysts can also be associated with abnormalities of urinary system such as ectopic ureter, unilateral renal agenesis and renal hypoplasia.<sup>4</sup> Ectopic ureters can have direct communications with the vagina and introitus, and also have been reported to communicate with Gartner duct cysts leading to urinary incontinence.<sup>4</sup> Although such abnormalities are commonly encountered in childhood, being mindful of such association should call forth investigation of the urinary system. Imaging by ultrasound or magnetic resonance imaging (MRI) is essential to identify the exact location and size of the cyst and communication with the urinary tract and the adjacent organs.

In conclusion, our patient was an unusual case of Gartner cyst mimicking a cystocele. While evaluating a protuberant mass through the introitus, assessment of the lesion along with proper imaging modalities like ultrasonography, IVP and MRI prove to be useful to arrive at a definitive diagnosis and also to differentiate the vaginal cysts and their association with adjacent organs.

### 3. REFERENCES

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