

Navigating a Rare Presentation: Case Report of a Large Gartner's Duct Cyst

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Abstract

Background: Mullerian ducts form the female genital tract and wolffian ducts form the male genital tract. In females, sometimes the wolffian duct persists and form the Gartner duct and its total or partial occlusion results in the formation of Gartner's cyst. It is typically small and asymptomatic and occurs along the antero-lateral wall of vagina.

Methods and Results: We report a case of 40-year-old woman who presented with a big mass coming out per vaginum. After examination, she was provisionally diagnosed as Gartner duct cyst, excision was done and confirmed as a case of Gartner's duct cyst on histopathological examination.

Conclusion: A good clinical examination along with radiological investigations aids in making a timely diagnosis and surgical management.

Keywords: Gartner's duct cyst, Mesonephric duct, Wolffian duct, Pelvic organ prolapse

Introduction

Urogenital tract is derived from two sets of ducts: Wolffian ducts (mesonephric) and the Mullerian ducts (paramesonephric). In women, during the eighth week of embryologic development, paramesonephric ducts fuse distally and develop into the uterus, cervix, and upper vagina. In females, wolffian duct regresses. Sometimes, they remain, and the caudal portion forms the Gartner duct cyst [1]. These cysts are mostly situated in the anterolateral wall of the proximal third of the vagina. The imperfect development of wolffian ducts can also lead to urogenital abnormalities, such as changes in the metanephric urinary system [2]. In association with Gartner's cyst, there are cases of urogenital abnormalities which have been reported like ectopic ureter, unilateral renal agenesis, and renal hypoplasia.

Gartner duct cysts are usually asymptomatic, <2 cm and are mostly an incidental finding. Gartner's cyst can be

accompanied by infections, bladder dysfunctions, abdominal pain, vaginal discharge, and urinary incontinence due to compression on the neck of the bladder [3]. Gartner cysts account for 11% of all vaginal cysts.

Differential diagnosis includes Bartholin's cyst, uterine prolapse, cystocele, rectocele, enterocele, urethral diverticulum, malignant growth, and endometriosis [4].

We report a rare case of an unusually large Gartner duct cyst of 10 cm and came with chief complaint of mass coming out per vaginum.

Case Report

A 40-year P3L3 woman presented with mass coming out of vagina for last 15 years, which was gradual in onset and progressive in nature. This swelling was disturbing her normal routine activities; hence she sought medical advice

for the same. She had delivered all three babies vaginally, and there was no history of difficult, prolonged, or instrumental delivery. Patient had regular menstrual cycles with normal flow. She had undergone laparoscopic tubal ligation 6-7 years back. There was no significant family history and there were no medical or surgical comorbidities. On examination, Per Abdomen- soft, no guarding, no rigidity, non-tender, no organomegaly. On per-speculum examination- vaginal mucosa was pale pink and dry with absent of rugosities, there was a 10 × 8 cm, cystic mass in the sub-urethral region arising from the left lateral vaginal wall. On per-vaginal examination, mass was non tender extending from just above the introitus to reaching up to the fornix. Uterus was multiparous size, anteverted, mobile and bilateral adnexa was free. On per vaginal examination, Bartholin gland cyst, uterine prolapse, cystocele, rectocele, enterocele were ruled out. All routine investigations were within the normal limits. Her Pap Smear was negative for intraepithelial lesion or malignancy (NILM). MRI was done to rule out other embryological and renal

anomalies and other rare abnormalities like ectopic vaginal ureterocele, which sometimes may not present with classic symptom of urinary incontinence. Contrast enhanced MRI was done which was suggestive of large simple cystic lesion (T1 and T2 hyperintense- 9.7 × 9.4 × 5.2 cm) likely originating from the left lateral wall of vagina below the level of pubic symphysis causing mass effect in the form of contralateral displacement of vagina with multiple uterine fibroids largest being sub serosal, located in the fundus (3.6 × 2.3 × 2.6 cm)-FIGO 6. On imaging, malignant growth, endometriosis was ruled out. Pre-operatively cystoscopy was done, urinary bladder was normal and there was no evidence of urethral diverticulum. Provisional diagnosis of Gartner's duct cyst was made. Patient was hence planned for surgical cyst excision; 500 ml hemorrhagic pus was drained intraoperatively from the cyst. Intra-operative phase was uneventful. Post operative period was uneventful and patient was discharged in stable condition. Histopathologic examination (HPE) report was consistent with Gartner's cyst.



Figure 1. Depicting Gartner's Duct.

Discussion

Gartner's cysts are typically solitary, unilateral, small with an average diameter of 2 cm and are in the anterolateral vaginal wall of the proximal one-third of the vagina. These cysts may increase in size and can be confused with cystocele and prolapse. Gartner's duct cyst can present with mass coming out per vaginum. General physical examination and TVS are sufficient for diagnosis. In our case the cyst was unusually large and symptomatic. Transvaginal ultrasound is the investigation of choice. Intravenous pyelography and CT are additional investigations that can be done. When cysts are asymptomatic and small, they can be managed expectantly as malignant transformation is rare [5].

Surgical excision is the main stay of treatment if it is symptomatic and large. If surgical resection is not possible other options are marsupialization, unroofing/partial excision, aspiration followed by tetracycline injection [6]. In our case the cyst was huge, so we did surgical excision. HPE post-surgical excision confirms final diagnosis which shows cyst lined with a non-mucinous cuboidal or low columnar epithelium. Smooth muscles may be seen around the Gartner duct cyst in pathological examination.

Conclusion

When Gartner's cyst is large, they mimic pelvic organ prolapse and remain untreated for long time causing morbidity to patient. When the cyst is large and symptomatic, we do surgical excision. A good clinical examination along with radiological investigations aids in making a timely diagnosis and surgical management.

Conflict of Interest

None.

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None.

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All authors have contributed equally in the article.

References

1. Emmons SL, Petty WM. Recurrent giant Gartner's duct cysts. A report of two cases. The Journal of Reproductive Medicine. 2001 Aug;46(8):773-5.
2. Rios SS, Pereira LC, Santos CB, Chen AC, Chen JR, de Fátima BVogt M. Conservative treatment and follow-up of vaginal Gartner's duct cysts: a case series. J Med Case Rep. 2016 Jun 2;10(1):147.
3. Ohya T, Tsunoda S, Arii S, Iwai T. Diagnosis and treatment for persistent Gartner duct cyst in an infant: A case report. J Pediatr Surg. 2002 Apr;37(4):E4.
4. Inocêncio G, Azevedo S, Braga A, Carinhas MJ. Large Gartner cyst. BMJ Case Rep. 2013 Feb 25;2013:bcr2012007996.
5. Indu NR, Hiremath PB, Reshmi M, Supriya MS, Hiremath R. Case report of a huge Gartner's cyst. Indian Journal of Obstetrics and Gynecology Research. 2023;10(1):67-9.
6. Niu S, Didde RD, Schuchmann JK, Zoorob D. Gartner's duct cysts: a review of surgical management and a new technique using fluorescein dye. Int Urogynecol J. 2020 Jan;31(1):55-61.