Case Report

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A Large Gartner Cyst in an Unmarried 17 Years old Female: A Case Report

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ABSTRACT

In females during the phase of embryonic development the mesonephric ducts also known as wolffian ducts usually degenerate although it can be a persistent remnants which may become clinically apparent. This remnant of vestiges which can persist is called as Gartner duct. Gartner ducts generally are located in the proximal anterolateral wall of vagina, however it can be found at other sites along the vaginal length. It can be confused with other vaginal cysts like skenes cysts, epidermoid cysts, inclusion cyst, sebaceuous cyst, urethral diverticula. Mostly found fortuitously within the lateral vaginal wall during routine examination as Gartner cyst are mostly asymptomatic presentation clinically. Even so the patient present with Symptoms the complaints could include dyspareunia, vaginal pain, and difficulty inserting tampoons with associated vaginal infections. The gartner cyst has low columnar epithelium which secretes mucinous material, when the duct is blocked or occluded it gets collected which forms the cyst thereby during vaginal examination usually a tense cyst is palpable or seen to bulge beneath the vaginal wall. The size and extension of the cyst can be confirmed by radiological imagings and later on by histopathological. In sympatomaticpatients marsupialization or excision of Gartner duct cysts are usually done.

Keywords: Gartner duct; Cyst; Vaginal mass; Surgical Excision.

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INTRODUCTION

Talking about the early embryonic developmental phase irrespective of the whether male or female fetus, there are mainly two types of ducts in the urogenital system which later on develop into reproductive and urinary system namely the Wolffian and the Müllerian ducts. Around the eight weeks of embryogenesis the mullerian ducts unite to form uterus, cervix and upper vagina and on the other hand in a female fetus Wolffian ducts becomes a vestigial organ which may form into gartner cyst.[1] Most of the time gartner cyst is a asymptomatic which is found incidentally during per vaginal examination. It is usually located in the anterolateral wall of vagina. It generally presents as

single unilateral vaginal cyst. They are usually not palpable per vaginally with the size usually being less than <2 cm but can also present with the larger mass which can be around 15 cms. Besides gartner duct cyst in vagina there are common vaginal cysts and mass presentations such as epidermal inclusion cyst, Bartholin duct cyst, and Mullerian cyst, Skene's gland cysts, urethral diverticulum, endometriotic cysts, and pelvic organ prolapse, particularly cystocele and enterocele.[2,3] Therefore It should be differentiated from other mass presentations in the vagina by clinical presentations, vaginal examinations, radiological examinations, and ultimately confirmed by histopathological findings. It is not uncommon that the benign cystic lesions of the urogenital tract can be seen in gynecologic and urologic practices. We are presenting a case report on a large gartner duct cyst in a 17 years unmarried girl who presented with a mass protruding out per vaginum and intraoperatively the mass was approximately 7×4×5 cm size in maximum dimension.[4]

CASE DESCRIPTION

A case of 17 yrs old unmarried nulligravida presented at gynaeopd with chief complain of swelling in genital tract which was insidious in onset and dysmenorrhea since menarche with history of analgesic intake to relieved the pain. No other associated known co-morbidities seen. Patient was not sexually active. Her menstrual cycle was regular lasting for 6-7 days, changes 2 to 3 pads per daywithout passage of any clots however with dysmenorrhea since menarche.

On local examination inspite of the cyst being large in size only small part of the cyst was seen protruding out of the introitusand it was palpable more at suprapubically.

USG whole abdomen was done on with normal size uterus and ET of 1.5 cm and a gartner cyst measuring 7.34×2.24×3.37 cm (shown in Fig. 1 A-C) in size at the right anterolateral wall of vagina. Bilateral adnexa were free with some free fluid in pod and no lymphadenopathy. CEMRI pelvis was done and it showed a non-enhancing suprapubic cystic lesion in right anterolateral wall of vagina.

During operation a gartner duct cyst of 7×4×5cm at right anterolateral of vaginal wall was seen. Open gartner cystectomy (shown in Fig. 2 A & B) was done by giving a transverse incision on the cyst over the anterior vaginal wall. Redundant vaginal wall excised n followed by a continuous sutures with vicryl 2'0. Betadine soaked roller gauge kept in situ.

Her post operative vitals were within normal range. The recovery period following the surgery went smoothly without any complications. The histopathological examination (as shown in Fig. 3 A & B) revealed that the cyst was lined with cuboidal and low columnar epithelium, lacking mucinous formation, and had a smooth muscle layer in the basal membrane, which is indicative of a Gartner duct cyst. She was discharged with a week and was heamodynamically stable all throughout the time and was advised to follow up. She visited at OPD for follow up after 3 weeks and with the wound all healed.

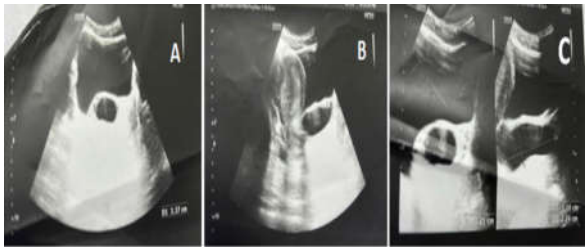

Fig. 1A-C: Ultrasound TAS image showing a well defined longitudinal cystic lesion of 7.34(CC)×2.24(AP)×3.37(TR) in anterior vaginal wall with most probability of being gartner duct cyst

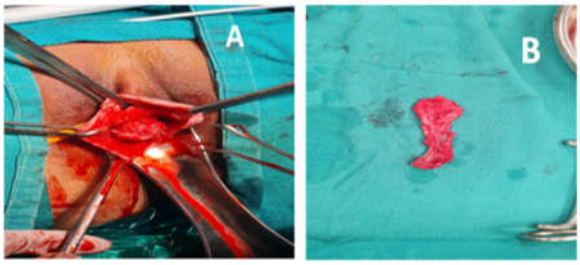

Fig. 2 A-B: Intraoperatively 7×4×5cm gartner cyst removed

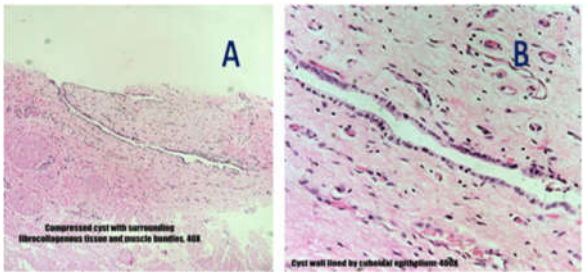

Fig. 3 A-B: A - showing cyst with fibrocollagenous tissue and muscle bundles on H&E at 40X magnification, B - cuboidal epithelium lining the cyst wall on H&E at 400X magnification

DISCUSSION

In female embryo, the wolffian (mesonephric) ducts typically regress, leaving the remnants such as the Gartner's duct, epoöphoron, and paroöphoron. If remnants of these ducts persist,

they can accumulate fluid, potentially leading to the formation of a vaginal wall cyst[5]. Vaginal cysts can be classified based on the histology of the cyst lining into three types: epidermal inclusion cysts, embryonic (Mullerian or Gartner's) cysts, and urothelial cysts.[6] It is usually seen in the reproductive age with approximate incidence of 1 in 200 female.[7] Gartner's duct cysts generally remain asymptomatic and are often discovered during a routine gynecological examination. However, in some cases it may enlarge to a noticeable size, that it not only cause symptoms such as visible skin tags but there can be urinary retention, pressure, itching, vaginal discharge dyspareunia (painful intercourse), pelvic pain, or a protrusion from the vagina so the gartner cyst can be confused with other mass presentation at the vagina.[8] Diagnosis can typically be achieved through a general vaginal examination and transvaginal ultrasound. While MRI can provide a more definitive diagnosis, it is usually not necessary in most cases. If the cysts are symptomatic and large, surgical excision or marsupilation is the primary treatment.[2,3,9]

CONCLUSION

For asymptomatic patients with Gartner's cysts, conservative therapy is a safe option due to the low incidence of these cysts. However, surgery is strongly recommended for patients experiencing severe symptoms or who have large cysts. During surgical intervention, it is an outmost important to insert a Foley catheter intraoperatively to prevent injuries to the urethra and bladder. Patients should be closely monitored after the procedure to minimize the risk of recurrence. A comprehensive clinical examination, along with radiological investigations not only to rule out the other causes of vaginal mass or cyst, is crucial for timely diagnosis and appropriate surgical management.

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