Case Report

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Mullerian Cyst: Case Report of a Rare Entity

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ABSTRACT

Mullerian cysts arise from the remnant of the Mullerian duct. They are usually asymptomatic and are diagnosed incidentally. Ultrasonography and Magnetic Resonance Imaging can help to determine the location and its relation to the surrounding structures, but thorough clinical knowledge and meticulous clinical examination help to rule out other causes and come to a precise diagnosis. The diagnosis is only made by histological examination. Surgical excision is often preferred. Here we report the case of a middle aged woman who presented with an anterior vaginal wall cyst, which turned out to be a Mullerian cyst on histopathological examination.

Keywords: Mullerian cyst; Anterior vaginal wall cyst; Mullerian duct.

INTRODUCTION

Mullerian cysts arise from the embryological remnants of the Mullerian duct. They are one of the most common anterior vaginal wall cysts. It is usually an incidental finding during a gynaecological examination. They are asymptomatic, but when large enough, they can present as swelling per vagina, vaginal discomfort, pressure symptoms like voiding difficulties, vaginal discharge, and dyspareunia.[1] Histopathological analysis is what determines the diagnosis. Management depends on the size of the cyst, but usually complete excision is done to prevent its recurrence.[2]

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CASE REPORT

A 50-year-old female patient came in with complaints of swelling in the private part for more than 10 years, gradually increasing in size. No bowel or bladder disturbance and no history ofpain. On examination, around 6x6 cm cystic swelling was noted in the antero-lateral wall of the vagina, which was non-tender, extending superiorly till 2 cm below the anterior lip of the cervix and inferiorly till the urethral meatus. Vaginal rugosities are lost over the swelling. No cough impulse was noted, and the size of the swelling remained the same after catheterization of the urinary bladder. No pus points or infective changes were noted in the swelling.

On transvaginal ultrasonography, an oval shaped cystic swelling of 5*4 cm was seen arising from the antero-lateral wall of the vagina. There is no evidence of any connection to the bladder wall. Whole abdomen ultrasonography was done to rule out any associated renal anomalies.

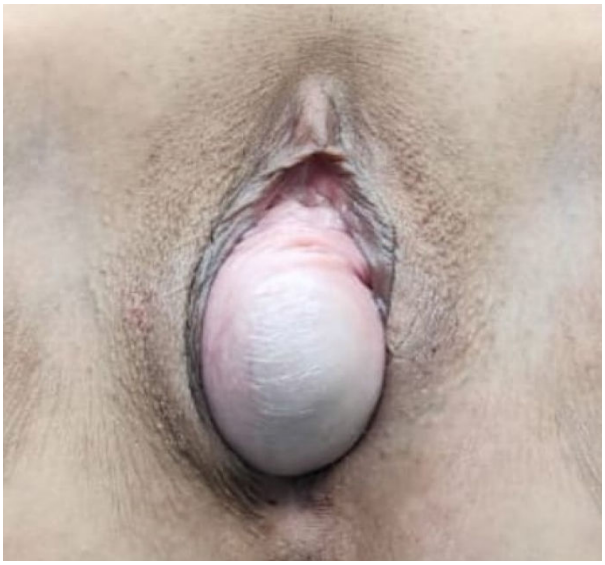

Fig. 1: Mullerian cyst

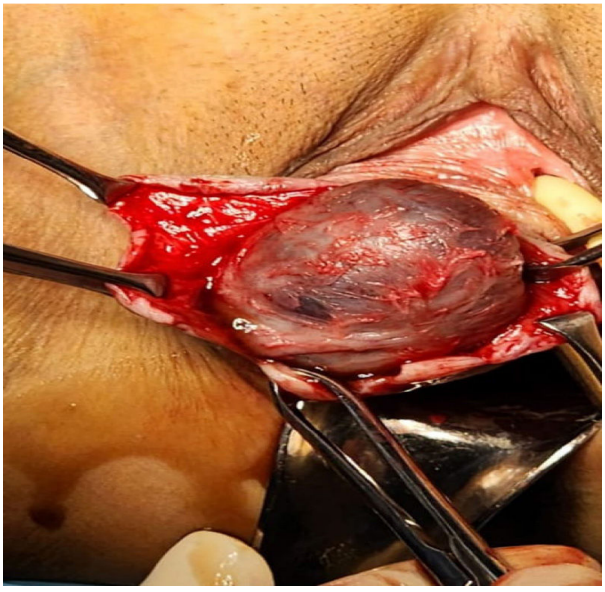

Fig. 2: Cyst being separated from the cyst wall

Complete cyst excision done under spinal anaesthesia. thick, dark brown mucinous fluid aspirated. A histopathological exam showed a Mullerian cyst with a wall made of cuboidal and partly ciliated columnar tubal-type epithelium with focal squamous metaplasia. The postoperative period was uneventful.

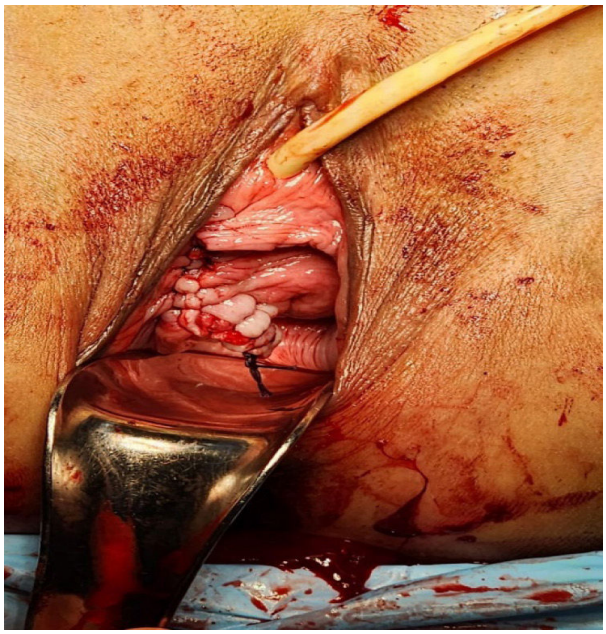

Fig. 3: Vaginal wall repair, after excision of the cyst

DISCUSSION

Vaginal wall cysts are rare, with a prevalence of 1 in 200 women.[1] They can be either congenital or acquired. The origin of the vaginal wall cysts may be squamous (traumatic), Wolffian (mesonephric), Mullerian (paramesonephric), or urogenital.[3] Literature says that the most common type of vaginal cyst is Mullerian cyst.[2] Mullerian cysts develop from the remnants of Mullerian ducts or paramesonephric ducts.[4]

Both mesonephric and paramesonephric ducts are present during the embryologic life of the female fetus.[5] During the eighth to ninth week of gestation, the mesonephric duct degenerates due to the absence of testosterone, and the distal ends of the two mullerian ducts fuse, forming the fallopian tubes, uterus, cervix, upper vagina, vestibule, and female urethra. The mullerian ducts join the urogenital sinus to form the sino-vaginal bulb. The sino-vaginal bulb proliferates cranially and evaginates to form the lower third of the vagina. During this process, the squamous epithelium of the urogenital sinus replaces the mucinous columnar epithelium of the Mullerian duct.[2] The remnant of the Mullerian epithelium in the lower third of the vagina may continue its mucinous secretion and later develop as Mullerian cysts.

Mullerian cysts are usually single and can happen anywhere along the mullerian duct. They are usually lined by endocervical epithelium (columnar to cuboidal mucinous epithelium),

endometrioid, or tubal epithelium. They usually present in the third or fourth decade of life.[1,7] The most common location of the Mullerian cyst is the anterolateral wall of the vagina. And they are usually asymptomatic and are typically an incidental finding during gynecological examination, but they may also present with vaginal discomfort, pressure symptoms like voiding difficulties, vaginal discharge, and dyspareunia.[1] Mullerian cysts are seldom associated with other genitourinary abnormalities.[6] Ultrasound helps to characterise the lesion and its nature, and MRI helps to delineate the location and extent of the cyst with respect to the surrounding structures.[6,7] But diagnosis is made only by histopathological examination.[8]

Rarely, Mullerian cysts are also noticed in atypical locations and are classified into three groups: cutaneous ciliated cysts, retroperitoneal formations, and mediastinal Mullerian cysts.[8]

Mullerian cysts are incidental findings that have to be differentiated from the following entities: a) epidermal inclusion cysts of the vagina, which usually occur secondary to surgical procedures like episiotomies. The location of the cyst correlates with the previous surgery. They are lined by squamous epithelium, and the contents are usually keratinous, which is thick. They are lined by squamous epithelium, and the contents are usually keratinous, which is thick and "cheese like' if contaminated. b) Gartner's duct cyst arises from the remnants of Gartner's duct, or Mesonephric duct. They can be associated with multiple abnormalities in the urinary system. The location is usually on the anterolateral wall of the vagina. The lining epithelium is usually cuboidal or low columnar non-mucinous epithelium; c) urethral diverticulum, which is also considered to be one of the differential diagnoses and is lined by transitional epithelium or squamous epithelium.[1,9]

Management is surgical, followed by histopathological examination to establish the diagnosis. But smaller cysts, less than 4 cm, usually require no treatment and can be followed up.[2]

CONCLUSION

Vaginal wall cysts are not uncommon in day-to-day practice. Proper history taking, clinical examination, and imaging modalities can help us arrive at a diagnosis, and plan for further management. A complete cyst excision is usually done to prevent its recurrence. Our case was an unusual scenario where the female was diagnosed with a vaginal wall cyst, which was an incidental finding, and a complete excision was done, with the diagnosis of a Mullerian cyst established by histological examination.

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