

Paraurethral Cyst: A Rare Case Report

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Abstract

Paraurethral cyst or Skene's duct cyst is a rare disorder which occurs due to the obstruction of Skene's duct adjacent to the external urethral orifice. We experienced a 28 years young lady with acquired paraurethral cyst for 2 months just to the left and posterior aspect of urethral orifice and compressing it toward the right side. There is no standardized treatment guideline for this cyst till now. In this case report, we discuss the surgical management and histopathological findings of this lady with paraurethral cyst.

Keywords: Paraurethral Cyst; Skene's Duct Cyst; Genitourinary Remnants; Mullarian Cysts; Gartner Duct Cysts; Epithelial Inclusion Cysts; Marsupialization.

Introduction

Paraurethral cyst or Skene's duct cyst is considered to occur due to the obstruction of said duct adjacent to the external urethral orifice. Being a rare entity there is no standardized treatment guideline. We discuss the surgical management and histopathological findings of an adult woman with paraurethral cyst abutting the posterior wall of external urethral meatus.

Case Report

A 28 years old woman, homemaker, was referred to our surgery OPD by gynaecologist for a complaint of swelling in the vulvar region for 2

months. It started gradually and progressed to 2 x 1.5 cm in size. It was not associated with any pain or discharge and didn't increase in size during micturition, menstruation or coitus. She had a full term normal vaginal delivery 2 years ago and gave recent history of spontaneous abortion twice; 5 and 2 months before.

Systemic examination was unremarkable. Local examination following separation of labia minor revealed a 2 x 1.5 cm of ovoidal swelling just to the left and posterior aspect of the urethral orifice occupying 4 to 7 o'clock circumference and compressing the urethral opening and pushing it towards the right side.

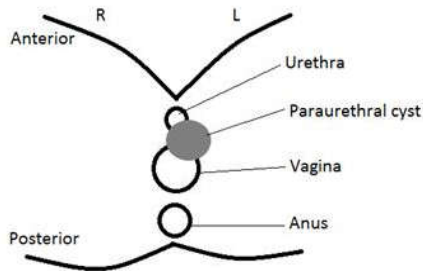
It was initially firm and within a fortnight increased to a size of 2 x 2 cm abutting the vaginal wall and became soft, fluctuant, non-tender, non-reducible and non-pulsatile (Picture-A). Digital rectal, per vaginal and per speculum examinations were unremarkable. Laboratory parameters were normal. Cystourethroscopy revealed neither any intraluminal communication in urethra nor any urethral diverticulum.

Excision was planned with pre-operative diagnosis of paraurethral cyst. Partial cyst removal along with part of urethral wall through an elliptical incision on vaginal mucosa was done. Small portion of adherent urethral wall was excised with cyst (Picture-B). Lateral part of cyst wall was marsupialized with vaginal mucosa while urethra sutured over indwelling Foley's catheter (Picture-C). The post-surgical period was uneventful. Catheter was removed on 12th post-operative day and she passed urine without any further complaints. Microscopic findings were consistent with the presumptive clinical and surgical diagnosis with typical appearance of multiple layer epithelial benign cells.

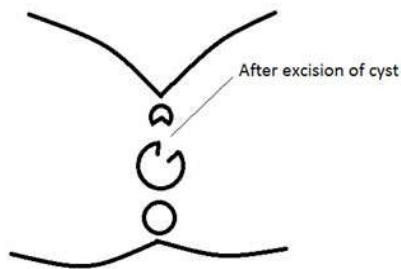
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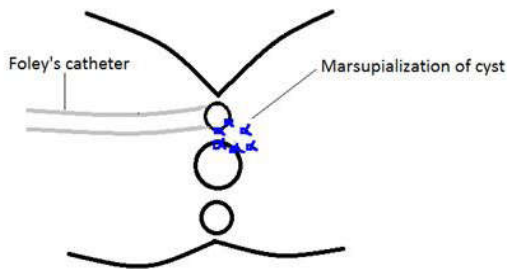
Received on 13.09.2017, Accepted on 25.09.2017



Picture- A



Picture- B



Picture- C

Discussion

Paraurethral cysts or Skene's duct cysts are rare inter-labial genitourinary cysts, which may be either acquired or of congenital pathology [1,2]. Congenital paraurethral cysts arise from the various embryological components and genitourinary remnants [2]. Acquired inclusion cysts of the surface epithelium are generally secondary to the trauma of childbirth or are caused by iatrogenic surgical trauma [2]. According to the criteria proposed by Das, paraurethral cysts are classified into 4 groups- Epithelial inclusion cysts, Mullarian cysts, Gartner duct cysts and Skene duct cysts [3,4].

Anatomy

Paraurethral glands and their ducts that empty into the female urethra are rudimentary analogues of

the prostate [5]. According to Huffman, there are 6-30 paraurethral ducts and two largest ducts are commonly referred to as Skene ducts [5]. Skene's glands secrete a small amount of mucoid material on sexual stimulation which aids in local lubrication [6]. It is located inferiorly and laterally on either side of the urethra being analogous to the prostate gland [6].

Histopathology

Microscopically, the cysts are usually lined by stratified squamous epithelium and may contain caseous or purulent material [2].

Development and Pathophysiology

Distal vaginal wall, skene's ducts, paraurethral glands and urethra all are derived from the urogenital sinus; hence any dislocation of urothelium into an adjacent area may account for the appearance of these rare paraurethral cysts [5-7]. It is also considered to occur due to the obstruction of Skene's duct [3]. However, the etiology of ductal obstruction is unknown in neonates; but, in adults, it may be precipitated by inflammation [1]. Stasis of infected exudate with deposition of salt and desquamated epithelium covering the cyst may predispose to stone formation within these cysts [8].

Clinical Features and Diagnosis

Diagnosis is made by clinical examination. Characteristic cysts are asymptomatic, non-tender, soft, cystic ovoid masses, 6-10 mm in diameter, yellowish in colour and located on either side of urethral meatus [6,9]. Complications of Skene's glands are uncommon [6,8]. Cross et al. examined 140 asymptomatic women (mean age 41 years) using endo-vaginal and perineal sonography and a proportion of 2.9% of cases revealed asymptomatic paraurethral cystic structures lying adjacent to the urethra while the communication with the urethra was not convincingly demonstrated in any of the cases [10]. Hence, cystourethroscopy is essential to rule out urethral diverticulum [10].

Management

Owing rare occurrence, literature on the ideal management of cysts and abscesses is sparse without clear guidelines [6,8]. Management of Skene's gland cysts and abscesses may include conservative management with antibiotic therapy. If this fails, surgical management may be warranted; which

includes needle aspiration, marsupialization, partial excision, and total excision [6,8]. However, complete excision of cyst has certain limitation such as injuring or weakening of urethral wall which can lead to urinary incontinence or urethro-vaginal fistula formation [9].

Conclusion

Paraurethral cysts are rare inter-labial genitourinary cysts, which may be either acquired or congenital. It occurs due to the obstruction of Skene's duct. Diagnosis is made by clinical examination but cystourethroscopy is a must to rule out urethral diverticulum. Partial cyst excision with marsupialization of deeper part can be considered as one of the better options for surgical treatment.

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