

# Paraurethral Skene's duct cyst in a newborn

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## Abstract

Paraurethral or Skene's duct cysts are rare causes of interlabial masses in neonates. The diagnosis of Skene's duct cysts in the neonatal period is based on its location, in relation to the urethra, and the demonstration of transitional epithelium in the cyst wall. The distinguishing features of paraurethral cysts are the displacement of urethral meatus by the mass and a cyst containing milky fluid. Thus, we report a case of a Skene's duct cyst in a newborn which was treated by incision and drainage.

**Key Words:** Newborn, paraurethral cyst, Skene's duct cyst

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## INTRODUCTION

Paraurethral glands and ducts that empty into the vaginal vestibule close to the urethral meatus are rudimentary female homologs of the prostate, and the two largest of these ducts are known as Skene's ducts.<sup>[1]</sup> Paraurethral or Skene's duct cysts are a rare cause of interlabial mass in neonates. A cyst or abscess occurs, most commonly in the third and fourth decades. The exact incidence of Skene's gland cyst is unknown; however, one study has reported the incidence among neonates to be 1 in 2074 female births.<sup>[2]</sup> These cysts arise from the obstruction of the glandular ductus or cystic degeneration of embryonic remnants of the paraurethral glands. Thus, we report a case of Skene's duct cyst in a newborn which was treated by incision and drainage.


## CASE REPORT

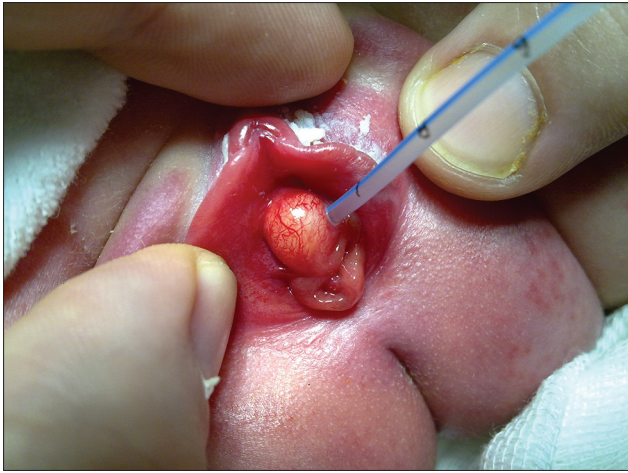
A healthy 12-day-old female infant was referred with interlabial mass. In patient's history, cystic mass was noticed soon after birth

and its size did not change during this period. On examination, she had a soft, ovoid cystic mass, approximately 15 mm in diameter. It was located on the right side of the urethral meatus and the urethra was deviated to the left side [Figure 1]. Vaginal patency was also verified. Laboratory investigations included renal function tests, urinalysis, and complete blood count which were all normal. Urinary and pelvic ultrasounds and voiding cystourethrography were normal. Examination under anesthesia was performed. A Skene's duct cyst was identified. Urethral catheterization was done and the cyst was treated by incision and drainage [Figure 2]. Biopsy was not made. The remainder of the examination was normal. The microscopic evaluation of the fluid was normal and no bacterium was detected on culture. The postoperative course was uneventful. No recurrence was observed within 9 months after drainage.

## DISCUSSION

Skene's gland was discovered and described by Alexander Johnston Chalmers Skene in 1880.<sup>[3]</sup> The paraurethral glands and ducts known to form as the outpouching of the urethra during the third gestational month are homologs of the male prostate. The paraurethral glands which are between 6 and 30 in number, have their own ducts that open just inside the urethral meatus. The largest two of these are the paraurethral glands of Skene.<sup>[2,4]</sup> Skene's glands secrete a mucoid material with sexual stimulation, but in the newborns paraurethral glands infrequently respond

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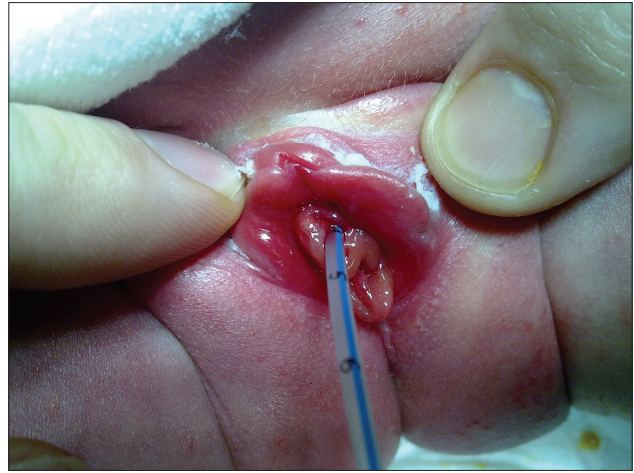
**Figure 1:** Characteristic appearance of Skene's duct cyst in a female newborn

to maternal estrogen and secrete a small amount of the mucoid material.<sup>[2]</sup> Skene's duct cyst is rare in any age group, especially in newborns. The precise etiology of paraurethral cysts is unknown. But the obstruction of Skene's ducts as a result of infection or inflammation, or cystic degeneration of embryonic remnants of the paraurethral glands, has been postulated.

The differential diagnosis of paraurethral Skene's duct cysts in newborns includes imperforate hymen, Gardner duct cyst, Mullerian duct cyst, urethral prolapse, rhabdomyosarcoma of the vagina, prolapsed ectopic ureterocele, condyloma, urethral polyp, congenital lipoma and vaginal prolapse.<sup>[1]</sup> The histologic appearance of the cyst epithelium identifies its embryologic origin. The vagina is derived from the paramesonephric (Mullerian) duct, the mesonephric (Wolfian) ducts and the urogenital sinus. The vaginal cysts are lined with stratified squamous epithelium, if they are originating from the Mullerian duct. Cysts derived from persistent mesonephric (Gartner's) ducts are lined with cuboidal epithelium. Finding a transitional epithelium in the cyst wall will confirm the origin to be in the urinary tract, since the distal vaginal wall, Skene's ducts, paraurethral glands, and urethra are all derived from the urogenital sinus.<sup>[5]</sup>

The diagnosis of a Skene's duct cyst in a newborn was based on its location in relation to the urethra or the demonstration of transitional epithelium in the cyst wall. The distinguishing features of paraurethral cysts are the displacement of the urethral meatus by the mass and a cyst containing milky fluid. Even though in our patient we had found that Skene's duct cyst had characteristic clinical findings which were helpful for diagnosis, we completed urological evaluation to differentiate Skene's duct cyst from other interlabial masses.

Treatment options vary from observation to surgery. Rarely, Skene's duct cysts require no drainage and resolve with time



**Figure 2:** After drainage, the cyst disappeared and the urethral meatus returned to the midline position

or rupture spontaneously.<sup>[6]</sup> However, most cysts require drainage.<sup>[2]</sup> Needle aspiration and incisional drainage of cysts are some of the options for treatment. Whenever examination under general anesthesia is not required, treatment can be performed under local anesthesia with a cream which contains lidocaine. Partial excision of the cyst with marsupialization of its wall has been proposed as the treatment of choice for Skene's duct cysts in newborns.<sup>[7]</sup> We treated Skene's duct cyst successfully with only a small incision. Because complete or partial excision and marsupialization are more traumatic options than needle aspiration and incisional drainage, thus they should be reserved for adolescents and recurrent cases in newborns.

Finally, we believe that incision and drainage is a simple, safe, and effective method for the treatment of Skene's duct cysts in newborns.

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