CASE REPORT

Paraurethral cysts in newborn girls

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SUMMARY

The Skene's glands are located in the distal urethral floor, and they are the largest paraurethral glands. Skene's gland cysts are unusual at any age, but specially newborns. However, due to lack of systematic reporting, true incidence is probably higher than the one described in the literature. We present a newborn girl found to have a paraurethral cyst at birth. Characteristic displacement of the urethral opening was revealed on catheterisation. Review of literature, and comparison to a similar case of interlabial mass previously evaluated, were carried out. We suggest a prenatal development possibly due to maternal oestrogen exposure, although further studies are necessary to determine the exact aetiology. Treatment options include observation, needle aspiration and incisional drainage, partial excision, unroofing and marsupialisation. Expectant management is preferred in asymptomatic cases, particularly in newborns, since spontaneous resolution can occur without long-term sequelae or recurrence. Cases with acute obstruction require immediate surgical management.

BACKGROUND

Alexander Johnston Chalmers Skene¹ was the first one to describe the largest of the paraurethral glands in 1880.

The Skene's glands are located in the distal urethral floor. They are considered prostatic homologues, as they secrete mucoid material with sexual stimulation.^{2–4}

They are also known to be hormone-dependant and can increase in size during pregnancy and undergo atrophy with menopause.⁵

Skene's gland cysts are unusual at any age but specially newborns.^{3, 4} Most of the cases go unnoticed unless they are complicated. Incidence varies from 1 in 2000 to 1 in 7000 reported among female neonates, representing <0.5% of congenital malformations of the urinary tract.^{5, 6} The exact aetiology remains unknown. Possible causes include exposure to maternal oestrogen, obstruction or stenosis of the duct, and dislocation of the urothelium.^{3, 7–9}

CASE PRESENTATION

We present a newborn girl with a non-tender interlabial ovoid mass discovered at birth. There was no urinary obstruction associated. The remainder of the examination was normal, and the prenatal history was unremarkable.

INVESTIGATIONS

Pelvic ultrasound showed a 1.2×1.2×1.0 cm complex soft tissue lesion seen at the vagina at midline, with no internal enhancement on colour

Doppler images (figure 1). MRI of the pelvis with and without contrast described an 11×10 mm cystic pelvic mass seen at midline, posterior to the urethra (figure 2). Vaginal patency was verified. Urethral catheterisation was performed, and displacement of the meatus was observed to be on the left lateral wall of the mass. Biopsy was not performed.

Figure 1 Pelvic ultrasound, sagittal plane of the vagina, showing the cyst (C).

Figure 2 Pelvic MRI, coronal plane of the pelvis, showing the cyst (C). Ub, urinary bladder; Vv, vulvar vestibule.

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DIFFERENTIAL DIAGNOSIS

Location and displacement of the urethral meatus by the mass are characteristic of paraurethral cysts.¹⁰

Differential diagnoses include imperforate hymen with hydrocolpos, rhabdomyosarcoma of the vagina, prolapsed urethra, ectopic ureterocele, and urethral diverticulum.^{9 11}

TREATMENT

The patient received expectant management.

OUTCOME AND FOLLOW-UP

Spontaneous resolution occurred.

DISCUSSION

Owing to the benign course and the lack of systematic reporting, true incidence is probably higher than the one described in the literature. We decided to compare the case to a newborn girl with a similar presentation who had been previously evaluated.¹² Patients were not related. Imaging studies had shown a cystic mass in a paraurethral location, without enhancement, vaginal anomalies or obstruction. The urethral catheterisation performed under anaesthesia had identified the urethral opening location on the right lateral wall of the cystic structure (figure 3).¹² An equal sided predominance for the urethral opening displacement could be hypothesised, although further studies are necessary.

Hymenal cysts, Skene's duct cysts and Gartner's duct cysts, which are cystic dilations of the Wolffian duct remnants located in the anterolateral wall of the vagina, usually present as interlabial mass.²

In neonates, the Skene's duct cyst generally presents as an asymptomatic bulging mass with small vessels on the surface, located on either side of the urethral meatus.

The diagnosis of a Skene's duct cyst can be made by physical examination alone, although it can be assisted by imaging studies to exclude complications or associated anomalies.^{3 8 9}

Needle aspiration followed by contrast radiography could be considered as an alternative to urological examinations.¹¹ Pathology, when performed, would reveal transitional or squamous epithelium.^{3 4 6}

Management is controversial. Treatment options include observation, needle aspiration and incisional drainage of the milky fluid content, partial excision, unroofing and marsupialisation.^{3 4 7}

Figure 3 Catheterised urethra (U) showing displacement of the meatus by the cyst (C).

Expectant management is preferred in asymptomatic cases, particularly in newborns, since spontaneous resolution can occur without long-term sequelae or recurrence.

Surgical management is required in cases with acute obstruction.^{3 5 6 8 9}

The literature does not state the exact moment for the cyst's development within the perinatal and neonatal period. Given the early neonatal diagnosis of these cases, and the influence of maternal oestrogen as a possible cause, we suggest a prenatal development more than a rapid postnatal evolution. Further studies are needed.

Learning points

- ▶ Detailed prenatal ultrasound evaluation and comprehensive postnatal examination of newborn genitalia are important for the diagnosis of congenital anomalies.
- ▶ Location and displacement of the urethral meatus by the mass are characteristic of paraurethral cysts, and diagnosis can be made by physical examination alone, although can be assisted by imaging studies to exclude complications or associated anomalies.
- ▶ Systematic reporting is needed to calculate the true incidence of the Skene's duct cyst.
- ▶ Further studies are necessary to determine the exact aetiology of these cysts and the urethral opening displacement's side predominance.
- ▶ Acute obstruction of urinary outflow requires immediate surgical management.

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Competing interests None declared.

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