

Parameatal Urethral Cyst: Case Report and Brief Literature Review

Parameatal Üretral Kist: Olgu Sunumu ve Literatür Derlemesi

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ABSTRACT Parameatal urethral cyst is an uncommon condition of the pediatric male population. We report a case of parameatal urethral cyst in a 9-year-old boy to remind this uncommon condition to urologists. The cyst recognized at infancy by the parents but the boy presented to our clinic at the age of 9 when the mass was grown enough to cause spraying of urine and poor cosmesis. The recommended treatment option is complete excision of the cyst with total removal of the epithelium. Parameatal cyst is a benign, usually asymptomatic condition that is rarely associated with infection or inflammation and may contain a variety of epithelial types. The cyst may resolve spontaneously in neonates but if not, is also easily excised with a minimal risk of morbidity and recurrence.

Key Words: Cysts; urethral diseases; pediatrics

ÖZET Parameatal üretral kist pediatrik erkek popülasyonunda nadir görülen bir patolojidir. Biz de ürologlara bu nadir görülen anomaliyi hatırlatmak için parametal kisti olan 9 yaşında erkek çocuğu vakasını takdim ediyoruz. Kist, çocuğun ebeveynleri tarafından doğumda farkedilmesine rağmen hasta kliniğimize 9 yaşındayken, idrar yaparken dağılma ve kötü görünüm şikayeti ile getirildi. Bu anomali için önerilen tedavi seçeneği, kistin etrafındaki epitel dokusu ile beraber cerrahi olarak çıkarılmasıdır. Parameatal kist nadiren enfeksiyon ve inflamasyon ile ilişkili, genellikle asemptomatik olan ve çeşitli epitel tipleri içerebilen benign bir patolojidir. Kist neonatal çağda kendiliğinden rezorbe olarak kaybolabilir ancak kaybolmazsa çok düşük morbidite ve rekürrens riski ile cerrahi yolla çıkartılabilir.

Anahtar Kelimeler: Kistler; üretra hastalıkları; pediatri

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Parameatal urethral cyst is an uncommon condition of the pediatric population. To date, only about 50 cases have been reported in boys.¹⁻¹⁰ Also, rarely, paraurethral cysts could be seen in female infants as intralabial masses. Skene glands' dilatation is thought to cause this pathologic condition in girls, and the treatment is surgery.¹¹ Parameatal cysts are the benign, slow-growing congenital anomalies which manifest at early period of life. According to the literature review, these cysts are not related with infection, circumcision, and/or traumas. It is stated by the authors that this round shape and generally unilateral cysts do not cause any urogenital damage, except spraying at the urine.⁴ With this case report we aimed to re-

mind urologists and pediatricists this uncommon condition and its treatment choices briefly.

CASE REPORT

A 9-year-old boy patient has been brought to our clinic by his family with cyst at the penis (Figure 1). The cyst has been recognized early at infancy by the family, but the boy has been presented to our clinic at the age of 9 when the mass was grown enough to cause spraying of urine and poor cosmesis. At the physical examination a 8-mm diameter parameatal cyst was located at left ventro-lateral of the meatus. Complete excision of the cyst with total removal of the epithelium is the treatment of choice for the prevention of recurrence. This operation has done under general anesthesia. The urethral catheter, which has put on intraoperatively, has removed postoperative 2nd day. Patient was discharged right after he urinates well and have no sign of infection. Histopathological evalu-



FIGURE 1: Typical ventrolateral location of parameatal cyst.
(See color figure at Bkz. <http://uroloji.turkiyeklinikleri.com/>)

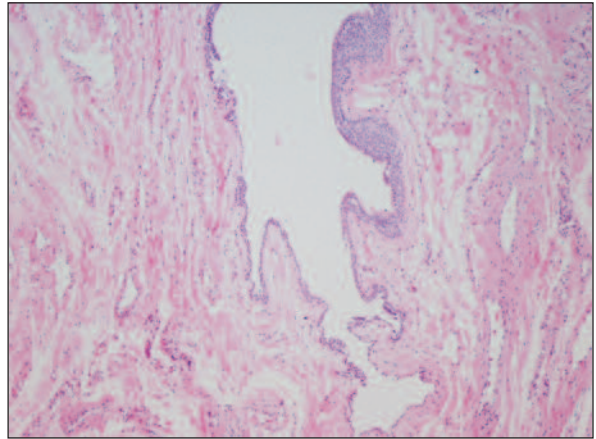


FIGURE 2: Histopathological image of parameatal cyst showing that simple cyst lined with transitional epithelia. Note that no evidence of inflammation and malignancy (H.E. & x100).

(See color figure at Bkz. <http://uroloji.turkiyeklinikleri.com/>)

ation of cyst showed that simple cyst lined with transitional epithelia. There were no evidence of inflammation and/or malignancy (Figure 2). There were no recurrence and any urinating problem at 1 year follow-up.

DISCUSSION

Parameatal cysts are the benign structures that are typically less than 1 cm in diameter and located ventral and/or lateral to the meatus. In adult patients, cysts could grow up to 2-cm in diameter. Mostly patients do not have symptoms, except urinating and cosmetic problems. They can be presented at infancy or at any time of childhood, though they manifest usually during the first year of life. These cysts are not related with any other genitourinary abnormalities and also circumcision status.⁴ The recommended treatment option is complete excision of the cyst with total removal of the epithelium. However, authors have reported recurrences with simple aspiration or unroofing of the cysts.^{2,3,8} To date, spontaneous resolution of these cysts reported only in few cases.¹⁰

Parameatal cyst was first described by Ohno in 1919.⁸ Subsequently 4 more articles on parameatal cysts were published by the Japanese with an attention on the histopathological findings.^{2,3,8,12}

Probably parametatal cysts recognized early at infancy by parents but given no attention till it causes some urinating and cosmetic problems. Symptoms due to parametatal cyst are described as only being cosmetic problem and spraying of the urine. The etiology of parametatal cysts is unclear, and numerous theories have been propounded in the literature. Thompson and Lantin stated that the cysts represent a persistence of cystic spaces found normally in the process of preputial delamination.¹ Some other authors have stated that the cysts form from anomalous fusion of the urethra, are a form of the median raphe cyst or are caused by obstruction of the paraurethral ducts.^{2-5,12,13} The last one seems to be the most likely etiology given the consistent location of the cysts (ventral and/or lateral to the meatus corresponding to the location of the paraurethral ducts) and also variable time of onset. Some cysts are related with an inflammatory infiltrate, and have led to the theory that infection or trauma contributes to the obstruction of the paraurethral ducts in some cases.^{5,8} But Willis et al. reported that only 1 patient had inflammation on the pathology specimen at their largest series of parametatal cysts in North America. Although inflammation may contribute to obstruction of the paraurethral ducts, based on the literature review it is unlikely that inflammation is a major factor leading to parametatal cysts.¹⁰

Histopathological findings of the parametatal cysts vary widely in the literature. Otsuka et al, who described a classification system of these cysts into 3 types, with urethral (stratified columnar, cuboidal, and/or transitional epithelium) being the most common, followed by epidermal (squamous epithelium), and mixed types.¹² Willis et al. stated that the transitional and cuboidal epithelia were the most common components, followed by columnar and squamous epithelia.¹⁰ Papali et al. reported parametatal urethral cysts as being lined

most commonly with either columnar or cuboidal cells.¹³

The treatment choice of this anomaly changes by the age. Observation of parametatal cysts is the best treatment of choice in neonates, since some cases will spontaneously resolve, and the risk of anesthesia is not warranted within the first few months of life. If the cysts do not resolve by age of 6 months, surgical intervention with complete excision of the cyst wall may be performed with minimal morbidity and excellent cosmetic results. When cysts occur in older children, spontaneous resolution is less common and surgical intervention is offered without a waiting period.¹⁰ There have been no known recurrences or other complications in the literature who underwent complete excision. However, authors have reported recurrences with simple aspiration or unroofing of the cysts.^{2,3,8}

Therefore, we excised sharply the entire cyst wall without entering the cyst cavity to prevent leaving any remnant of the cyst wall. The skin edges are closed with an absorbable suture for hemostasis. If the cyst is entered during the operation the cyst wall should be dissected off the underlying tissue in its' entirety.

This procedure is usually performed under general anesthesia on an outpatient basis, but also can be performed with a local anesthetic in the office setting in cooperative children with small cysts.

CONCLUSION

Parametatal cyst is a benign, usually asymptomatic condition that is rarely associated with infection or inflammation. This condition may contain a variety of epithelial types. The cyst may resolve spontaneously in neonates, but is also easily excised with a minimal risk of morbidity and recurrence.

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