

RARE MALE GENITELIA LESION (PREPUTIAL CYSTS AND OTHERS)

Dr. Binod Kumar¹, Dr. Zamurrad Parveen² and Dr. Md. Asjad Karim Bakhteyar*³

¹Associate Professor Department of General Surgery PMCH Patna, Bihar, India.

²Junior Resident in Department of Obstetrics & Gynecology, PMCH Patna, Bihar India.

³Junior Resident in General Surgery, PMCH Patna Bihar, India.

Received date: 03 January 2019

Revised date: 24 January 2019

Accepted date: 15 February 2019

*Corresponding author: Dr. Md. Asjad Karim Bakhteyar

Department of Obstetric and Gynecology PMCH Patna Bihar, India.

ABSTRACT

Introduction: Preputial cyst is very uncommon lesion of prepuce. Only some cases have been reported word wide. Most common preputial cyst is median raphe cyst. Schwannoma of prepuce and urethral diverticula is uncommon. Reporting this case is of worth. Most of the cysts are congenital but some acquired varieties are also reported. **Material and Methods:** This is a prospective study consisting of five cases of preputial cyst. Detail history of patients, clinical examination, investigation, surgical treatment and out-come was noted and critically analyzed. **Result:** Five patients have been reported to have preputial cyst. Three patients have median raphe cyst out of which one have cystic septation with abscess cavity, one has schwannoma of prepuce and one have urethral diverticula. Circumcision was done in four cases, but in urethral diverticula, diverticulectomy and urethroplasty was done. No recurrence was reported following one year follow-up.

KEYWORDS: Preputial cyst, Median raphe cyst, Schwannoma, Circumcision, Urethral diverticula, Urethroplasty.^[1]

INTRODUCTION

Preputial cyst is uncommon cyst. It arises from various cells of prepuce. Most commonly cyst arises from preputial gland near median raphe.^[1] But lipoma, schwannoma, smegma pearl, smegma Epstein pearl, smegmalith, foreign body can occur out-side the median raphe. Most of the median raphe cyst is congenital that can be evident at childhood or younger age. Acquired cyst may appear at any age. Median raphe cyst may be seen any-where from perineum to prepuce in ventral midline. Most common median raphe cyst is near prepuce but rarely it is found in perineal region.^[2] Schwannoma is uncommon lesion of prepuce. Urethral diverticulum is also a ventral midline cystic lesion, most commonly found in peno-scrotal region of penile shaft. Peculiarity of this diverticulum is that patient has to compress diverticula to pass urine.

MATERIAL AND METHODS

This series consist of five cases encountered between April 2016 to January 2018, in Patna Medical College and Hospital Patna, Bihar India. Detail history of all cases regarding age, sex, onset duration, progression, associated disease and comorbidities, history of trauma,

dysuria. Patients were counseled about surgery, related intra and post-operative complication. Consent for study and publication were taken from each patient. After routine investigation circumcision was done in 4 cases, in one case diverticulectomy and urethroplasty was done, specimen was sent for histopathological examination. Patients were followed for 1 year to know about any major complication and recurrence of disease.

RESULT

Five patients have reported within the age group of 12 to 68 years with various clinical features to in surgery OPD. Three patients have median raphe cyst. One has urethral diverticulum and one has schwannoma.

Out of the three patients with median raphe cysts 2 patients were below 20 years of age, for which circumcision was done. On histopathological examination one has pseudo stratified columnar epithelium and has mixed variety. One patient was of 22 years of age having septated median raphe cyst. One cavity has pus while one has cystic fluid. Abscess cavity was spontaneously drained. Circumcision was done for

that, histopathology shows mixed variety of epithelium. No complication was reported in 1 year follow-up.

One patient of 68 years presented to OPD with cutaneous lump at prepuce dorsally and similar lesion was at scrotal wall. It was solid in consistency. Scrotal lump was excised and circumcision was done. Specimen was sent for histopathological examination. Report shows it was schwannoma. On one year follow-up no complication was reported.

One patient of 27 years old with urethral diverticula was reported in OPD. Peculiarity of this was that patient was unable to pass urine normally. Patient has to press diverticula to pass urine. Diverticula was visible and palpable at peno-scrotal of ventral penile. He has the history of chronic UTI. After proper work-up diverticulectomy and urethroplasty was done. After 1 year follow-up no major complication was reported. Patient was warned about future urethral stricture.

DISCUSSION

Preputial glands are modified sebaceous glands. Glands secretions are meant for lubricating penis during coitus though a little bit. Preputial glands are prone to bacterial infection and subsequent abscess formation.^[2] This is also the site of various cystic lesion of penis. It may include epidermal cysts, lipomas, steatocystomas, dermoid cysts, pilonidal cysts, tyson glands and urethral diverticulums,^[4] smegma pearl, prepuce Epstein pearl, smegmaliths and foreign body,^[5] schwannoma.

Although cyst of prepuce is very rare, only few cases have been reported in literature. It was first described by Mermet in 1895,^[6] and by Lantin and Thompson in 1956.^[7] Usually develop along the median raphe. One case where lesion was dorsal which was diagnosed as schwannoma. Cysts of prepuce may be congenital or acquired.

Pathogenesis of these diseases are poorly understood.^[8] There are various theories for its development. These include

- 1) *Tissue trapping theory*: according to this tissue trapping could occur at the time embryogenesis or organogenesis or at later stage, either due to a defective fusion of the urethral folds or an anomalous outgrowth of the epithelium, which becomes sequestered and independent after the primary closure of the median raphe.
- 2) Another theory proposes that the median raphe cysts could also be caused by the anomalous developmental rest of the peri-urethral glands of

Littre. This theory explains the presence of intraepithelial mucus cells and glandular structures in some cases.

- 3) Some authors suggested that it may develop from the blockage of the paraurethral ducts.

According to tissue trapping theory, depending upon the nature of tissue trapped the lining of the cyst may vary. Four different types have been recognized so far. They are.^[9]

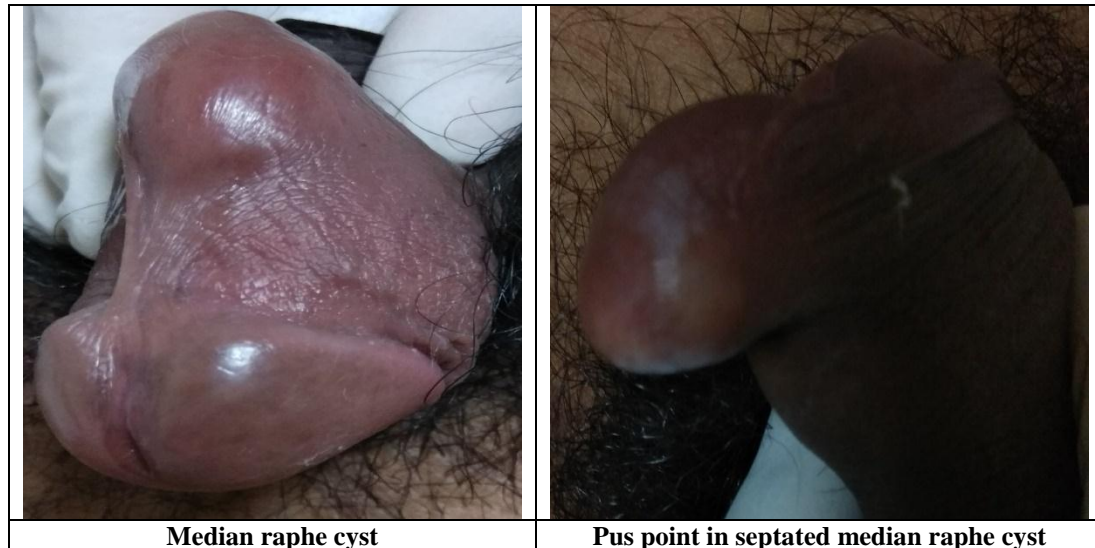
1. Pseudo stratified columnar epithelium (if the proximal urethral cells are trapped),
2. Squamous cell epithelium (if the distal urethral cells are trapped),
3. Glandular epithelium (if the peri-urethral glands are trapped) and
4. Mixed type.

According to some author mixed type is least common but some advocate for second most common. In our study 2 cases have mixed type, one has pseudo stratified columnar epithelium; one was a case of schwannoma and one was urethral diverticulum. On histopathological examination this solid lesion shows schwannoma having Antoni type A and Antoni type B cells.

It may be due acquired condition. Acquired cysts are inclusion cysts seen after penile surgery like circumcision or hypospadias surgery^[2], local trauma. In our case three cases have been reported to be acquired. One was following regional trauma, one was schwannoma and another was urethral diverticulum. Peculiarity of one of the median raphe cyst^[10] was that it was septated. Usually median raphe cysts are solitary without any septation. In one case of 22 year old young male cyst was septated. In left side of septa abscess was present but in right side of septa fluid was present.

The cysts are usually small, soft/firm, freely movable masses and other features like same color as your skin or slightly discolored, same texture as the surrounding skin, no pain when touched, but may feel tender or sensitive when inflamed or abscess is formed. Out of these 4 cases one case was schwannoma which was firm in consistency reported in 68 years old male. Schwannoma is rare preputial lesion only some cases have been reported^[11] when infection or abscess is present it may lead to fever. Growth of the cyst is very slow over time.

Several terms, including mucus cyst of the penis, genitoperineal median raphe cyst, parameatal cyst, hydrocystoma and apocrine cystadenoma of the penile shaft, should be considered synonymous.



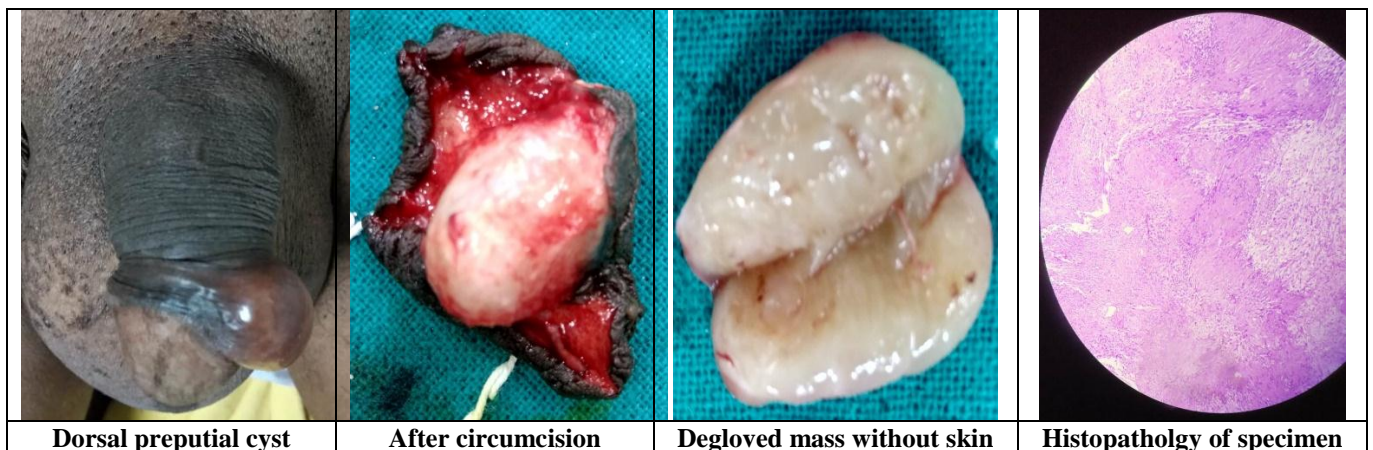
Median raphe cyst

Pus point in septated median raphe cyst

Fig. 1: Median Raphe Cyst.

They are midline-developmental cysts that can be found anywhere from the anus to the urinary meatus. Most of them are present since birth, but usually they are only detectable on adolescence or adulthood. The cysts

develop mainly on the penile ventral surface, around the glans. Usually, they are asymptomatic but can be complicated by infection, trauma or can make coitus difficult, UTI etc.



Dorsal preputial cyst

After circumcision

Degloved mass without skin

Histopathology of specimen

Fig. 2: Schwannoma of prepuce.

Out of the four 2 patients reported due to dysuria, it may be probably due to partial obstruction of urinary flow and 2 presented due to unusual appearance. One patient was having chronic UTI with out-pouching at ventral urethra.

Surgery is main stray of treatment in these cases. In past some have tried aspiration of cystic content but recurrence is very high. After circumcision of median raphe cyst and schwannoma, no recurrence was reported. For small urethral diveticual, only diverticulectomy is sufficient nut for large diverticulum as in our case diverticulectomy and urethroplasty,^[1,2] was done.

CONCLUSSION

Preputial cyst rare cystic lesion of prepuce. There is various presentation of it like median raphe cyst, urethral diverticulum, schwannoma etc. surgery is main stray of treatment.

REFERENCES

1. Cole LA, Helwig EB. Mucoïd cysts of the penile skin. *J Urol*, 1976; 115: 397-400.
2. Scelwyn M. Median raphe cyst of the perineum presenting as a perianal polyp. *Pathology*, 1996; 28(2): 201–202. doi: 10.1080/00313029600169893.
3. Marco Castagnetti, Mike Leonard, Luis Guerra, Ciro Esposito, Marcello Cimador. Benign penile skin anomalies in children: a primer for pediatricians. *World J Pediatr*, 2015; 11(4): 316-323.
4. Velasco E. Mucoïd cyst of penis skin [in Spanish]. *Urol Colomb*, 1993; 3: 99-104.
5. Sonthalia S, Singal A. Smegma pearls in young uncircumcised boys. *Pediatr Dermatol* 2016; 33(3): e186–9.
6. Mermet P. Congenital cysts of the genitoperineal raphe. *Rev Chir*, 1895; 15: 382-435.

7. Lantin PM, Thompson IM. Parameatal cysts of the glans penis. *J Urol*, 1956; 76: 753-5.
8. Otsuka T, Ueda Y, Terauchi M, et al. Median raphe (parameatal) cysts of the penis. *J Urol*, 1998; 159: 1918-20.
9. Anandhi Amaranathan, Sankappa P. Sinhasan, and Simon David Dasiah, Median Raphe Cysts of the Prepuccial Skin, with Triple Histological Linings: A Case Report and Review of the Literature. *J Clin Diagn Res.*, 2013 Jul; 7(7): 1466–1468.
10. Cardoso R, Freitas JD, Reis JP, et al. Median raphe cyst of the penis. *Dermatol Online J*, 2005; 11: 37.
11. Paul J. Marsidi. Chester C. Winter. Schwannoma of penis. *Urology*, October 1980; 16(3): 303-4.
12. Kirks DR, Grossman H. Congenital saccular anterior urethral diverticulum. *Radiology*, 1981; 140: 367–72.