



A Rare Case of Penile Epidermoid Cyst: A Case Report

¹Dr. Harsh Patel, Resident, Department of General Surgery, SSG Hospital, Vadodara, Gujarat, India – 390001

²Dr. Sushil Damor, Associate Professor, Department of General Surgery, SSG Hospital, Vadodara, Gujarat, India – 390001

³Dr. Digant Patel, Assistant Professor, Department of General Surgery, SSG Hospital, Vadodara, Gujarat, India - 390001

⁴Dr. Jagrut Patel, Assistant Professor, Department of General Surgery, SSG Hospital, Vadodara, Gujarat, India - 390001

⁵Dr. Mukesh Pancholi, HOD, Department of General Surgery, SSG Hospital, Vadodara, Gujarat, India – 390001

⁶Dr. Akshat Vyas, Resident, Department of General surgery, SSG Hospital, Vadodara, Gujarat, India - 390001

Corresponding Author: Dr. Harsh Patel, Resident, Department of General Surgery, SSG Hospital, Vadodara, Gujarat, India – 390001

How to citation this article: Dr. Harsh Patel, Dr. Sushil Damor, Dr. Digant Patel, Dr. Jagrut Patel, Dr. Mukesh Pancholi, Dr. Akshat Vyas, “A Rare Case of Penile Epidermoid Cyst: A Case Report”, IJMACR- March - 2025, Volume – 8, Issue - 2, P. No. 197 – 200.

Open Access Article: © 2025: Dr. Harsh Patel, et al. This is an open access journal and article distributed under the terms of the creative common's attribution license (<http://creativecommons.org/licenses/by/4.0>). Which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

The most prevalent cutaneous cysts are epidermoid cysts. Only 0.2% cases of genital epidermoid cysts noted also in that Very few examples of penile epidermoid cysts have been documented in the literature, indicating their rarity.

A 4-year-old male presented to our outpatient department with complaints of swelling over tip of penis since birth but the parents failed to seek medical attention at that time. After the age of 4 years, patient developed irritation, pain and itching at tip of penis and minimal obstructive urinary symptoms. The patient had no past medical or Drug history or Surgical history or Traumatic history.

Keywords: Congenital, Median raphe, Embryonic, Penile epidermoid cyst

Introduction

Epidermoid cysts sometimes present at unusual places like penis, palms, buttock region, soles. Its usual etiology is defect in median raphe closure, but doesn't always prove this theory. It is usually managed by excision and closure by suturing, post-operative antibiotics and analgesics. Cysts in the penis are rare. A soft lump in the penis' frenulum which was asymptomatic and was gradually increasing in size. Excision of swelling was done, which was identified as an epidermoid cyst of the penis. In the year post excision, no recurrence has been observed.

As far as we are aware, there were no prior case reports of cancer occurring in penile cystic lesions. Given the embryogenesis and type of the disease, clinicians should try more suitable management in these patients, which may involve either careful surveillance or total cystectomy.

Epidermoid cyst now being observed to manifest at uncommon locations, need more investigations.

Patient Presentation

A 4-year-old male presented to our outpatient department with complaints of swelling over tip of penis since birth but the parents failed to seek medical attention at that time. After the age of 4 years, patient developed irritation, pain and itching at tip of penis and minimal obstructive urinary symptoms. The patient had no past medical or Drug history or surgical history or Traumatic history.



Figure 1: patient's penis at presentation in outpatient department



Figure 2: patient's penis at presentation in outpatient department – dorsal view

Examination

On physical examination,

Situation	Dorsal aspect of distal penis
Size	Approx 1 cm × 0.5 cm
Shape	Round
Surface	Smooth surface
Edge	Well defined Edge
Colour	Normal skin colour from outside
Consistency	Uniformly soft
Fluctuation	Present
Compressibility	Compressible
Transillumination	Negative
Slip sign	Negative
Tenderness	Absent

Investigations

All routine blood investigations are within normal range.

Treatment

Patient was taken up for surgical excision. A Vertical incision was made over most prominent part of swelling. Skin over swelling was cut and incision was deepened upto deep fascia. On compression of swelling a semi-solid debris was visualized which was completely excised and sent for histopathological examination and a thorough wash with betadine and hydrogen peroxide solution was given. Approx 2cm x 1cm Vertical defect was present over the ventral aspect of tip of penis which was repaired using 3-0 ethilon suture in an interrupted manner. A sterile dressing with neomycin ointment was applied.



Figure 3: Excision of swelling in operation theatre

Follow up and outcome

The patient was put under the cover of antibiotics.

Post op Day 1, patient had complaint of mild pain over the penile region which subsided with oral analgesics.

Patient was discharged on post op Day 1 with follow up on post op Day 3 and Day 5 for dressing and post op Day 14 for suture removal.

No wound discharge/dehiscence/seroma formation or any other immediate post-operative complications were noted.

Discussion

Benign slow-growing tumours called epidermoid cysts develop when the epidermis implants itself into the skin's dermal layer. They typically appear in the third or fourth decade of life and are more prevalent in men than in women. The hairy parts are frequently the places of presentation. 90% of the scalp, followed in decreasing order by the face, trunk, neck, extremities, and genital area. Large cysts may spread into the pelvic area next to the rectum and displace the anus and vagina.

Several explanations have been proposed in the literature regarding the etiopathogenesis of epidermal cysts. Incorrect ectodermal cell positioning during cellular differentiation, resulting in aberrant embryogenesis. Epidermal cells are transplanted into the dermis when an area, particularly the extremities, is traumatized, injured, or compressed. The existence of cysts on the face, neck, trunk, and genital area would most likely be explained by inflammation and cystic alterations of pilosebaceous structures in the dermis. Cysts on the palms and soles are most likely caused by Human Papilloma Virus infection of the eccrine ducts. Because gastrointestinal neoplasms are linked to Gardner syndrome, doctors should be careful to rule them out in patients with numerous

epidermal inclusion cysts. Examples of differential diagnoses are neurofibroma and lipoma.

The most frequent consequence that results in an abscess and patient symptoms is infection. According to a study by Bauer, most of the carcinomas were well-differentiated, and the malignant degeneration rate of epidermal inclusion cysts into squamous-cell carcinoma was 2.2%.

The preferred course of treatment is cyst excision. To prevent damage to surrounding essential structures and contents leakage, which could otherwise result in wound infection and likely recurrence, careful and cautious dissection is necessary. The reported and observed recurrence rate is 3%. Therefore, it is necessary to remove the entire cyst wall.

Later, histopathology verified the diagnosis of an epidermal cyst, revealing that the granular layer, exfoliative squamous epithelium, and keratin flakes lined the skin with the cyst underneath.

Conclusion

Although epidermal cysts are known to occur infrequently, they are now being observed to manifest at uncommon locations, emphasizing the need for more investigation into the etiopathogenesis of these cysts and how they grow at different body locations.

References

1. Singh S, Kaur T. Epidermoid cyst of penis. Indian J Dermatol Venereol Leprol. 2011 Sep-Oct;77(5):627. doi: 10.4103/ 0378-6323.84085. PMID: 21860184.
2. Rao A, Rao B, Kurian MJ, Pai RR. Two rare presentations of epidermal cyst. J Clin Diagn Res. 2014 Oct;8(10):OD01-3. doi: 10.7860/JCDR/ 2014/ 8070.4982. Epub 2014 Oct 20. PMID: 25478413; PMCID: PMC4253231.

3. Das A, Trupthi MC, War SS, Varghese AM.
Paediatric submental epidermoid cyst. BMJ Case Rep. 2022 Jul 12;15(7):e250722. doi: 10.1136/bcr-2022-250722. PMID: 35820729; PMCID: PMC9277382.
4. Jing Q, Wang X, Yuan X, Liu F, Zhang X.
Epidermoid cyst in ureter: A case report. Medicine (Baltimore). 2022 Sep 16;101(37):e30254. doi: 10.1097/MD.00000000000030254. PMID: 36123920; PMCID: PMC9478306.
5. Kim CS, Na YC, Yun CS, Huh WH, Lim BR.
Epidermoid cyst: A single-center review of 432 cases. Arch Craniofac Surg. 2020 Jun;21(3):171-175. Doi: 10.7181/acfs.2020.00248. Epub 2020 Jun 29. PMID: 32630989; PMCID: PMC7349137.