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A rare case of a large fibroepithelial polyp of the penis not associated with condom catheter use: A case report and review of literature.

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Abstract

Introduction

Fibroepithelial polyps (FEP) are rare benign tumours of the glans penis; there are only a few reported cases. The pathogenesis is unknown. However, they have been linked with chronic condom catheter use or prior penile surgery.

Case presentation

We report a 50 year old male who presented with a large FEP of the penis. The patient had no prior history of condom catheter use or any prior penile surgery.

Discussion

FEP are a rare occurrence, especially in the penis. Only a few cases have been reported in the literature, many of which are associated with long term condom catheter use. Our patient had a mass of size 20x15x6 cm, which is the largest occurrence so far, as per our review of literature.

Conclusion

Since FEP are a rare entity, they must be carefully evaluated to differentiate them from other similar conditions. Treatment is by the complete surgical excision of the tumor.

Keywords – Fibroepithelial polyp, condom catheter, penis, benign tumor

Introduction

Only a few cases of fibroepithelial polyps (FEP), a rare benign tumour of the glans penis, have been documented. Although the cause is unknown, they have been connected to long-term condom catheter use or previous penile surgery [1]. This mesodermal tumor is histologically made up of a cone-shaped fibrovascular stroma that protrudes from the submucosa [2]. The proximal urethra, bladder, posterior urethra, vagina, and labia minora are the locations where FEP from the urogenital system most frequently develop. On the glans penis, FEP are uncommon [3,4]. We present a case of FEP of the glans penis in a 50 year old diabetic male which is not associated with condom catheter use.

Case presentation

A 50 year old male patient presented to our hospital with a large multiloculated mass over penis since last 6 months, originating from glans penis with progressive increase in size with associated burning micturition, dribbling of urine and lower abdominal pain.

On examination, there was a large multiloculated mass of size 20x15x6 cm over the penis [Figure 1], involving the entire penis. Penis was not visible directly and it was buried into the mass. On palpation, the mass was firm in consistency and had a smooth surface. There was no fluctuation, transillumination or fungating ulceration over the mass. The patient also did not have any enlarged lymph nodes or lower limb edema. On examination, there were no other similar swellings in the body and no other genitourinary abnormalities. The patient had a history of type 2 diabetes mellitus and hypertension since the past 16 years and was on medication for the same. The patient did not report any weight loss, any history of trauma or past surgical history.

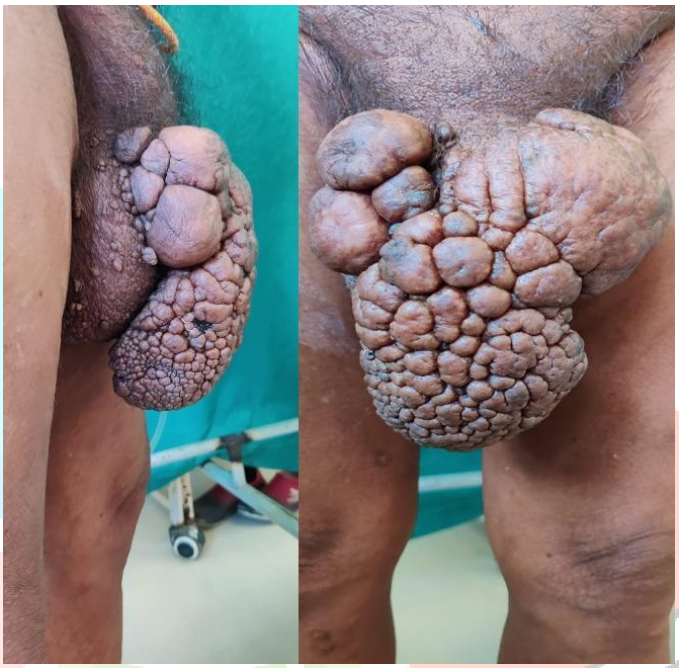

Figure 1 – Fibroepithelial polyp of the penis

Upon investigation, ultrasound of the kidneys, ureter and bladder showed bilateral raised cortical echogenicity with partial loss of corticomedullary differentiation. The right kidney (85x44 mm) appeared normal in size whereas the left kidney (57x28 mm) was smaller in size. Urinary bladder appeared well distended and showed a thickened wall (4-5 mm). Ultrasound of the inguinal region did not reveal any focal lesion or collection of fluid at the local site. The serum urea level was 96 mg/dL (Biological reference range: 10-45 mg/dL) and serum creatinine level of 5.30 mg/dL (Biological reference range: 0.6-1.4 mg/dL). Urine findings were unremarkable. The patient was also tested negative for Human Immunodeficiency virus (HIV), Hepatitis B surface Antigen (HbsAg), and Hepatitis C virus (HCV).

In order to manage the lower urinary tract symptoms, suprapubic catheterization under ultrasound guidance was performed since per urethral catheterization was difficult. Later, the lesion was excised [Figures 2 and 3] followed by split thickness skin grafting and it was sent for histopathological examination. The histopathological examination of the lesion was suggestive of FEP of the penis.

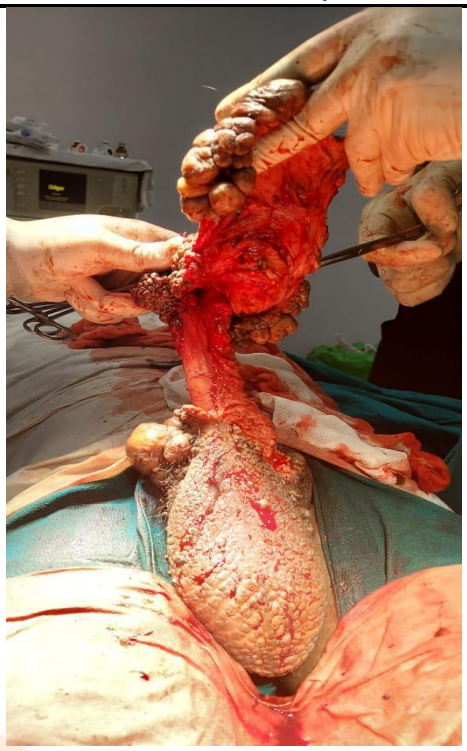

Figure 2 – Resection of the Fibroepithelial polyp

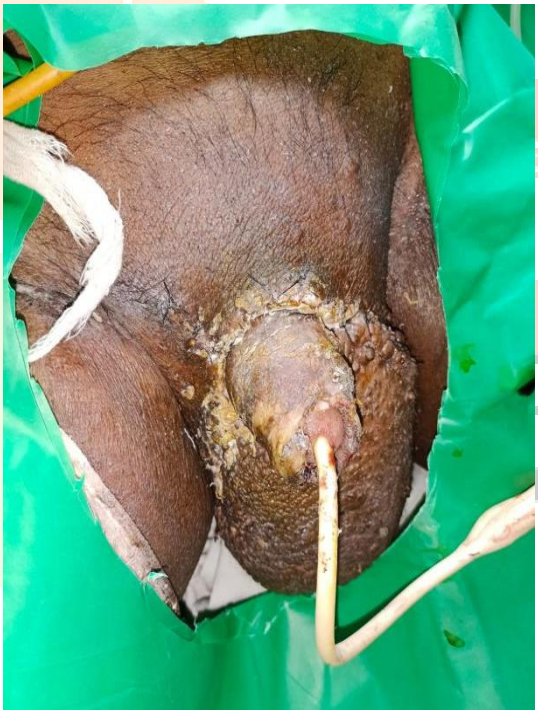

Figure 3 – Post operative image of the penis after complete resection

Discussion

FEP are benign tumors arising from the mesoderm [5]. They are most frequently observed in the ureter, renal pelvis, and infrequently in the posterior urethra or bladder [6]. However, their occurrence on the penis is unusual. But when present on the penis, it is present on the ventral side. They have been observed in children prenatally [7] and are frequently believed to be congenital [8]; however, after pyeloplasty, they may appear in several sites in the lower urinary tract in children [9,10].

Clinically, the differential diagnosis includes angiomyxoma, verrucous carcinoma, squamous cell carcinoma, urethral carcinoma, huge condylomas (also known as Buschke-Löwenstein tumours), condyloma acuminatum, and giant condylomas [3]. Prepuce FEP are larger, exhibit noticeable stromal edoema and vascular dilatation, and have higher stromal cellularity than ordinary cutaneous FEP (also known as skin tags, acrochordons, soft fibromas, fibroma molles, and fibroma pendulans). The axilla, neck, and eyelid are the

most common locations for skin tags, which are typically less than 5 mm in size [3]. Additionally, there have been instances of atypical origins and presentations in the oropharynx and respiratory tract [11,12]. They are not linked to colonic polyps as was once believed, but rather diabetes, as seen in our case, and hyperlipidemia [13,14].

Most of the penile FEP remain smaller than 5-7 cm. In our case, the polyp was about 20 cm in size which is one of the largest polyps recorded in the available literature [Table 1].

Study	Number of patients	Age (Years)	Greatest Dimension (cm)	Condom catheter use	Years of condom catheter use
Fetsch et al [3]	7	24-58	2-7.5	Yes, in 5	5 – 21
Turgut et al [4]	1	59	6	Yes	13
Yildirim et al [15]	1	4	0.7	No	-
Pena et al [16]	1	63	3	No	-
Al-Awadhi et al [17]	1	43	4	Yes	14
Mason et al [18]	1	36	2.6	Yes	>10
Kampantais [19]	1	78	4.5	No	-
Emir et al [20]	1	97	5	No	-
Hyun et al [21]	1	1.5	2.9	No	-
Banerji et al [22]	1	42	8	Yes	12
Tsai et al [23]	1	50	6.5	No	-
Kim et al [24]	1	45	6	Yes	10
Rodriguez Collar et al [1]	1	39	-	No	-
Napodano et al [25]	1	35	7	No	-
Yan et al [26]	1	62	7	No	-
Şencan et al [27]	1	0.5	0.7	No	-
Alrabadi et al [28]	1	73	15	Yes	17
Prashant et al [6]	2	3-4	0.6	No	-
Kumsar et al [29]	1	78	3.5	No	-
Goyal et al [30]	1	38	3.5	No	-

Table 1 – Review of literature of the available cases of Fibroepithelial cases of penis

The gross appearance could be condylomatous, nodular, globular, or polypoid. Nonpapillary transitional cell epithelium covers FEP that originate from the urinary tract, whereas squamous epithelium covers those that originate from the external genitalia or the skin. As a result, FEP of the penis are distinct from those of the urinary tracts in terms of their cause, appearance, and histologic characteristics [3]. Mast cells [18,24] &

lymphocytes [16] were also mentioned in a number of publications. The FEP of the vagina resemble FEP of the penis the most. Their enhanced stromal cellularity, multinucleated stromal cells, and proliferation of medium-sized arteries are shared characteristics. However, stromal cells from vaginal polyps frequently express alpha-smooth muscle actin and desmin, and they are more likely to contain myxoid matrix [3].

It has been proposed to be a reactive development brought on by the persistent condom catheter's localized pressure [3,22,23]. According to some articles polyps most likely appear as a result of prolonged irritation brought on by an ulceration, a maceration, or a urine leak around an ill-fitting device [23]. FEP due to peripheral vascular disease [22], congenital anomaly, and paraphimosis have also been reported [3,15]. According to a theory put forth by researchers, pressure from condom catheters causes a reactive process and a decline in vascular and lymphatic drainage. An instance of glandular FEP brought on by local pressure from genital hanging Kung Fu has also been documented [23].

In the case of our patient, lower urinary tract symptoms were present which has been also reported in previous cases [16]. Although local recurrence after local excision has been recorded in some cases, the prognosis is typically excellent [3,23,24]. FEP have been reported to develop into squamous cell carcinoma sometimes, but it is very rare [3,23]. Large polyp size, polyp foci of dysplasia, polyp rich vascularity and persistent chronic local irritation all predispose to malignant development. For a case of mass over the glans penis in a child, neurofibroma, hemangioma, epidermal inclusion cysts, and ventral raphe cysts must be ruled out.

Conclusion

FEP of the penis is a very rare, but treatable condition. Most of the cases of FEP are associated with chronic condom catheter use or prior surgery, however, there have been cases of pediatric FEP which might suggest a congenital etiology as well. Diagnosis of FEP requires histopathological evaluation of the lesion. More studies are required to document the true prevalence and etiopathogenesis of this rare presentation.