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A Rare Presentation of Priapism With Pus and its Management: A Case Report

KEYWORDS: Priapism, penile, abscess, corpora cavernosa

Akshay Ravat
Department of General Surgery, Bharati Hospital and Research Centre, Bharati Vidyapeeth Deemed University, Dhankawadi, Pune

Ibrahim Kothawala
Department of General Surgery, Bharati Hospital and Research Centre, Bharati Vidyapeeth Deemed University, Pune

ABSTRACT *Introduction: Priapism is a full or partial erection that continues more than 4 hours beyond sexual stimulation and orgasm or is unrelated to sexual stimulation. Here, we report a case of priapism associated with spontaneous corpus cavernosal pus, to the best of our knowledge this clinical course has not been described in an otherwise healthy patient.*

Case presentation: A 55-year-old Indian gentleman visited our hospital with the chief complaints of penile edema with ultrasound suggestive of penile swelling. The diagnostic investigations reported penile abscesses without a definite underlying etiology. The patient was treated successfully with surgical drainage and antibiotic treatment with normal erectile function.

Conclusion: Priapism with pus is a rare presentation and there is no routine standardized procedure for dealing with this medical condition. Patients having priapism with a pus should be warned.

Introduction

Priapism is characterized by persistent penile erection without sexual excitement or desire. Priapism is generally divided into ischaemic (low flow, Veno-occlusive) and non-ischaemic (high flow, arterial) forms. Ischaemic priapism is the most common type, has an overall incidence of 1.5 cases per 1,00,000 person in a year [1]. Ischaemic priapism is a urological emergency and can cause necrosis and fibrosis of the cavernous tissue and lead to erectile dysfunction (ED) [2]. Priapism requires prompt evaluation and may require emergency management. Corpus cavernosum having spontaneous abscess is an extremely rare pathology, even for the urologist, and its presentation is secondary to various etiologies such as immunosuppression, infection, penile instrumentation, injection, and trauma [3-9]. Here, we report a case of priapism associated with spontaneous corpus cavernosal pus, to the best of our knowledge this clinical course has not been described in an otherwise healthy patient.

Case report

A 55-year-old Indin male patient presented with priapism at Bharati Hospital and Research center, Pune. He has a complaint of swollen and painful penis from last 4 days with gradual development of swelling over a period of 10 days, fever with chills and burning micturition from last 8 days, painful penis erection from the last 2 days. The patient was found to have grade-I prostatomegaly. There was no history of any genital problem, hematuria, anemia, medical or drug history. He had been evaluated by general practitioner at an outside facility a week prior and was treated with amoxicillin and gentamycin but he did not respond to initial treatment. His past medical history included diabetes mellitus and hypertension since past one year. Hypertension was controlled through tablets AMLO (amlodipine) 5 mg daily and excellent diabetes mellitus controlled was found, as evidenced by a 4.8% value of Glycerated hemoglobin HbA1C. He was screened for immunocompromised status- HIV test was negative. More common precipitating etiologic factors such as malignancy, blood dyscrasia, leukemia, trauma, insect bite and other factors such as use of an intra-carvenosal vasodilator were absent; neither there was any history of a similar incident in the past. He has habituation to tobacco chewing since last 40 years.

Physical examination showed firm swelling involving the shaft of penis without any scar or sinus, nor any trauma or discharge. Skin was normal and tense; glans were soft; the temperature was raised as compared to other parts; the prepuce was not completely retractable till the corona; mucosa over glans, scrotum and testes was normal. The systemic examination did not reveal any positive finding for any septic focus. Thus, the diagnosis of the swollen, erythematous penis with penile abscess was made on a clinical basis, as there was no apparent cause of his penile abscess on history and clinical examination. The most important feature was pus.

The laboratory studies showed very low haemoglobin value (6.2 g/dl < normal range: 13.5-18 g/dl), high total leukocyte count (18900/cumm > normal range: 4000-11000), normal platelet count (3.02 lakhs, normal range: 1.5-4.5 L/cumm), normal prothrombin time (PT) and an International normalized ratio (INR) (PT/INR, 12.3/1.4). The abnormal microscopic blood picture was reported; microcytis hypochromic with anisopoikilocytosis anemia with target cells, tear drop cells, schitocytes seen and occasional spherocytes seen, a few neutrophils show toxic changes. The patient was found negative for sickling test. Blood urea was very high (110 mg/dl > normal range: 10-45 mg/dl) and high serum creatinine level was reported (3.6 mg/dl > normal range: 0.6-1.2 mg/dl). Serum Prostate-specific antigen (PSA) marker level was also high (4.73 ng/ml > Healthy males have below 4ng/ml). Normal hormonal assay was reported for T3 and T4 while the lower TSH level was reported (0.03 µIU/ml < normal range: 0.28-6.82 µIU). Serum electrolytes (Na, K and Ca ionised), liver and urine reports were all within their normal range. Blood gas analysis of aspirated intracorporeal blood from the base of penis

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showed a pO2 = 12.78 mm Hg, pCO2 = 78 mmHg and pH value of 6.5. The rest of the metabolic laboratory parameters were within normal limits.

Further investigation involving ultrasonography was also performed to explain more details. An ultrasonography abdomen and pelvis were founded with prostatomegaly with malrotated right kidney. The color Doppler of penis confirmed the physical examination findings of involvement of the corpus cavernosum, suggestive of Priapism. Both the corpora cavernosa appears dilated, congested (Right > left) with a hypoechoic collection with internal echoes within. It clearly demonstrates the lack of blood flow to the corpora which was suggestive of priapism in this patient.

Management

Based on history, physical examination and blood gases combined, the type of priapism involved found to be ischemic. Diagnostic aspiration from the dorsal part of corpora showed pus. Further surgical drainage was done through a small incision cut till the corpora to drain out the pus (Fig. 1). There was a significant amount of inflammation in the surrounding area. After thorough cleansing, a 16F silicone Foley catheter was inserted in the penis so that normal urine output could be achieved (Fig. 2). Ice packs were applied to penis for less pain and to lower down raised temperature. A total ~150cc of pus was drained from the penile shaft. The pus sample was investigated for microbiological growth, but no bacterial growth reported after one day of incubation. As shown in figure 3, this simple procedure helped him to reduce to its normal size. Postoperatively, the patient was given broad-spectrum augmentin (1.2 g twice daily, i.v.) and Metro (100 mg thrice daily, i.v.) for 1 weeks. At three month follow-up, healing of all wounds was complete. The patient reported normal voiding and erectile function.

Discussion

This is the first documented case of priapism associated corpus cavernosal pus. Other reports have only shown corporal pus, which are usually caused after trauma, intervention or infection [4,10,11]. Priapism is a medical condition describing prolonged erection despite the absence of physical or psychological stimulation. Primary priapism (idiopathic) is more common in adults while secondary priapism (cause known) is more common in children. Two types of priapism are recognized; the more common is called low-flow priapism; the other type is called high flow priapism. Low-flow priapism is associated with stasis in the corpus cavernosum. It results in hypoxia (pO2<30 mm Hg), hypercarbia (pCO2>60 mmHg) and acidosis (pH<7.30) in intracorporeal blood gas specimens [12] which were reported by our patient. Our characteristic of ischemic priapism includes complaint of painful penis and rigid and tender to palpation which was also shown in our patient. Our patient had no history of immunodeficiency, urethral discharge, trauma, dental abscesses or any kind of infection that could explain abscess formation. Beside this, diabetes mellitus has been correlated with priapism and cavernosal abscess [13], but the patient has excellent diabetic control. Thus, the cause of praipism and pus was not identified. But, we postulate that priapism has been playing a significant role in the development of pus in our patient.

The prime therapeutic goals were to remove pus, prevent the unwanted erection, relieve pain, and preserve potency. This can be achieved under ultrasonographic control or by surgical drainage. We utilized conventional incision and drainage approach. The small perineal incision was sufficient to collect pus from cavernosal bodies. It also helped in the fast closure of the wound. This approach had put the patient at reduced risk for recurrent abscesses or secondary infections. The use of postoperative antibiotics also helped him in recovery. At follow up, the patient reported a painless erection with no deviation and upon time returned to its flaccid state.

Conclusion

Abscess of the corpora cavernosa is a pathology with a wide variety of clinical manifestations. However, Priapism associated with an abscess of the corpora cavernosa is a rare pathology. We performed simple surgical procedure to remove the abscess. However, there is a need for better structured scientific research and evaluation of the treatment protocol for priapism having abscess feature.

Competing interests

The authors declare that they have no competing interests.

Consent

"Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal."

Authors' contributions

RA saw and managed patient, analyzed and interpreted the patient data, major contributor in writing the manuscript; KI supervised management of the patient; RA and KI performed the operation of the priapism. All authors read and approved the final manuscript."

Figure legends

Figure 1. Clinical photograph showing small surgical incision was made at tunica albuginea of the penis.

Figure 2. Surgical drainage of pus. [A] Pus collection procedure. [B] The collection of an abundant quantity of purulent matter.

Figure 3. Pre-discharge status of priapism treated penis. An incision was closed with absorbable sutures.

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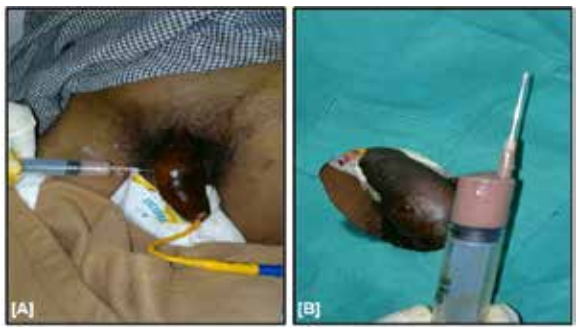

Figure 3. Pre-discharge status of priapism treated penis. An incision was closed with absorbable sutures.

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