AUCTORES
Globalize your Research

International Journal of Clinical Case Reports and Reviews
Krishna Mohan *

Open Access

Case Report

Penile tuberculosis mimicking as carcinoma in a 56-year-old male - a case report

Salik Umer Khayyam [1], Sazina Muzammil [2], Khalid Umer Khayyam [3], Krishna Mohan [4]*

[1]Government Medical College, Sangareddy Telangana, 502001, India.

[2]Head, Dept. of Physiology, Faculty of Dentistry, Jamia Millia Islamia, New Delhi-100025, India.

[3]Head, Department of Epidemiology and Public Health, National Institute of TB and Respiratory Diseases, Sri Aurobindo Marg, New Delhi-110030, India.

[4]Division of Clinical Research, School of Biomedical Sciences, Galgotias University, Uttar Pradesh, 203201, India.

***Corresponding Author:** Krishna Mohan, Division of Clinical Research, School of Biomedical Sciences, Galgotias University, Uttar Pradesh, 203201, India.

Received Date: July 06, 2024 | **Accepted Date:** July 12, 2024 | **Published Date:** July 19, 2024

Citation: Salik Umer Khayyam, Sazina Muzammil, Khalid Umer Khayyam, Krishna Mohan, (2024), Penile tuberculosis mimicking as carcinoma in a 56-year-old male - a case report, *International Journal of Clinical Case Reports and Reviews*, 18(4); **DOI:10.31579/2690-4861/501**

Abstract:

Penile tuberculosis is an extremely rare clinical condition. It can either be secondary (infection spreading from other organs) or primary (local spread). Reports have demonstrated its presentation as a subcutaneous nodule with or without superficial ulceration which may be clinically interpreted as advanced cancer of the penis. A 56-year-old man from New Delhi area, India presented to a tertiary care hospital with a history of unhealing growth/lesion over the penile shaft and glans for over 6 months. The lesion originally started as a small ulcer on the dorsal aspect of the glans penis which enlarged progressively. A biopsy, followed by a wedge biopsy was performed but the results were inconclusive. The patient was then subjected to partial penectomy after proper counselling. The histopathology from the partial penectomy specimen suggested signs of tubercular granuloma. The patient was advised antitubercular treatment (ATT) and he then reported to our tertiary care centre for treatment initiation. Treatment was completed successfully with no sign of any recurrence.

Key words: penile tuberculosis; non-healing ulcer; partial penectomy; antitubercular treatment

Introduction

Tuberculosis (TB) is an infectious disease caused by Mycobacterium tuberculosis. A small percentage of cases of TB are of extrapulmonary tuberculosis (EPTB) (10%–15%) , with lymph nodes being the most common site.1 2-10% of cases of extrapulmonary tuberculosis in developed nations are of genitourinary tuberculosis while its prevalence in developing nations is between 15% and 20%.2 Among genitourinary tuberculosis cases, penile tuberculosis is a very rare form, even in the developing countries.3 Because it can mimic a number of conditions, it is typically diagnosis of exclusion. We report a case of primary tuberculosis of the glans masquerading as carcinoma in an immunocompetent 56-year-old male which began as a small ulcer on the dorsal portion of the glans penis and gradually progressed with time.

Case report

The patient, a 56-year-old married man presented to a tertiary care hospital with a history of slow growing painless ulcer on the dorsum of the glans penis more than last 6 months (Figure 1).

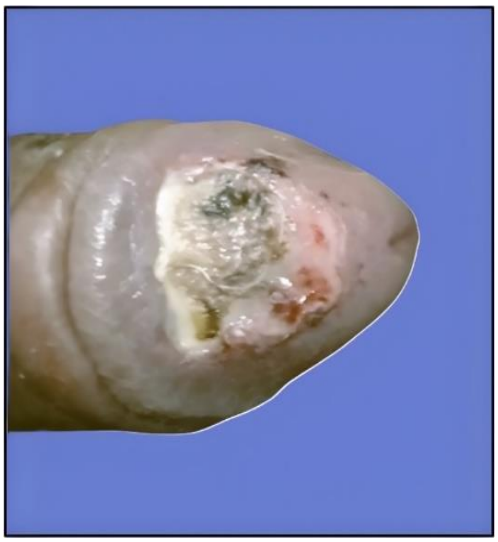

Figure 1: Primary tuberculosis of the glans penis showing ulcerated growth over dorsal part of the glans.

The patient was of average built and nourishment and worked at a steam press laundry facility at a garment export factory. He had type 2 diabetes mellitus controlled by regular medication and insulin and no history of tuberculosis. At the time of examination, the ulceration was about 2 c.m. X 2.5 c.m. on the dorsum of the glans which clinically looked like carcinoma of the penis. Inguinal lymph nodes were mildly enlarged and non-tender. Systemic examination did not reveal any abnormalities. The results of routine laboratory testing, such as CBC, urine analysis, liver and kidney function tests were all within normal ranges. Chest X-ray was also normal. Serology showed that human immunodeficiency virus, hepatitis B surface antigen and syphilis were nonreactive. Quantiferron TB Assay was found to be negative. Contrast-enhanced Magnetic Resonance Imaging (CE-MRI) of the pelvis was done which showed evidence of a poorly defined lesion ~20X26.7X9.9 mm in dorsum of the distal penile shaft reaching up to the glans, seen to lie in the subcutaneous plane, showing heterogenous enhancement and having a non-enhancing necrotic centre with possibility of mitotic aetiology.

A biopsy and a following wedge biopsy of the ulcer was done (Figure 2)

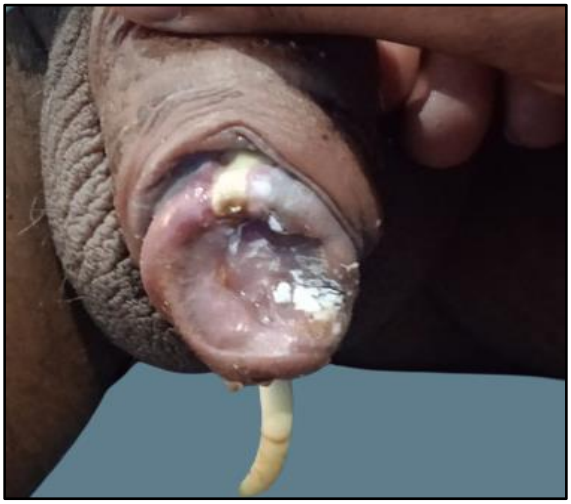

Figure 2: Image taken after wedge biopsy/mass excision was performed.

which were both sequentially inconclusive. ZN stain for AFB, tissue culture and GeneXpert for MtB/RIF were all negative. The patient was counselled about the need for further intervention in the form of partial penectomy and histopathological examinations (HPE). The patient was admitted at the tertiary care hospital and operated under spinal anaesthesia (SA). Partial penectomy was done and corpora closed in continuous fashion. Urethra opened ventrally and was sutured with skin (Figure 3).

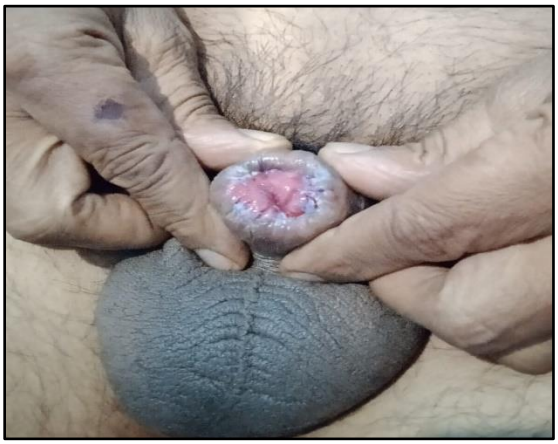

Figure 3: Image after partial penectomy procedure was performed (image at the time of pre-initiation of ATT).

Histological examination from the partial penectomy showed extensive chronic caseating granulomatous inflammation suggestive of tuberculosis. Based on this the patient was referred for anti-tuberculosis treatment (ATT) and reported to our tertiary care centre for treatment initiation.

The patient received antitubercular therapy (ATT) under programmatic guidelines of the National Tuberculosis Elimination Program (NTEP) consisting of isoniazid-rifampin-pyrazinamide-ethambutol (HRZE) for two months, then isoniazid-rifampin (HR) for the remaining four months. The patient completed treatment successfully and clinical examination revealed no abnormalities or recurrence of the lesion with the site of excision healed (Figure 4).

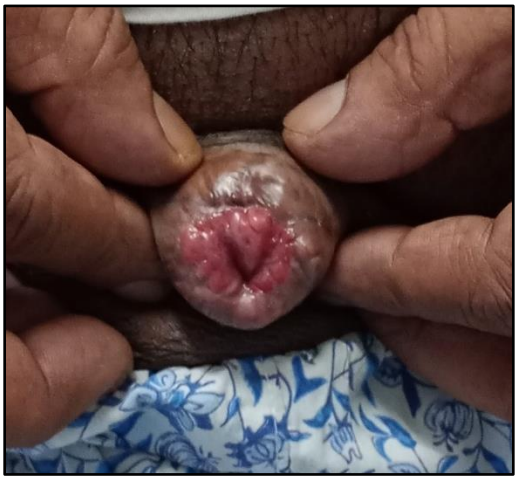

Figure 4: Image from post ATT of 6 months showing healing of the site with no signs of recurrence.

Appropriate verbal as well as written consent was taken for writing and communication of the case study. Ethical approval was not required for the case report and treatment was provided as per the programmatic guidelines of the National Tuberculosis Elimination Program (NTEP).

Discussion

Despite genitourinary TB being a common form of extrapulmonary TB, penile presentation is one of its least common forms (<1%) whereas the more prevalent sites of presentation are the epididymis (42%), seminal vesicle (23%), prostate (21%), testis (15%), and vas deferens (12%).4, 5 According to reports, Fournier reported the first instance of a patient with TB of the penis in 1848. The patient had several penile ulcers along with regional lymphadenopathy. [6]. Patients typically present with a papule or lump covering the glans that eventually ulcerates and increases in size. The disease usually stays in the subcutaneous tissue, though urethral and cavernosal involvement have been seen on occasion.7 TB of the glans penis might also manifest as tuberculous gumma, papulo-necrotic tuberculoid, tuberculous chancre, or TB cutis orificialis. TB of the glans penis can be primary (through direct inoculation), which can occur during sexual activity with a partner who has genital TB or through contact with tainted clothing or fabric has generally been recorded in majority of the instances.9,10 Whereas, the subsequent complication from pulmonary TB or other organ involvement is the secondary type. For the treatment of mycobacterial infections in the penis, anti-TB chemotherapy and in some cases surgical excision may be advised.7

Conclusion

When there is non-healing ulceration in the glans, tuberculosis should be taken into consideration, especially in nations where the disease is prevalent. Biopsies are necessary to rule out a malignant penile tumour and a chest X-ray and physical examination are required to ascertain whether a TB of the glans penis is a primary or secondary disease. Antitubercular medications are the cornerstone of therapy, although in

questionable circumstances, surgery might be necessary. Treatment should aim for organ sharing surgery with fashioning of the penis and antitubercular therapy. Penile excisions are linked to a significant psychological impact, hence patient counselling is crucial.

Acknowledgement

The authors are highly grateful to the Department of Tuberculosis and Respiratory Diseases, National Institute of Tuberculosis and Respiratory Diseases, New Delhi for providing necessary logistics and support for the case study.

Ethical Approval

Ethical approval is not required for this study following local or national guidelines.

Informed Consent

Both written and verbal consent were taken from the patient before communicating this case report.

Conflict of interest

The authors have no conflicts of interest to declare.

References

1. Das, A., Batabyal, S., Bhattacharjee, S., & Sengupta, A. (2016). A rare case of isolated testicular tuberculosis and review of literature. Journal of family medicine and primary care, 5(2), 468-470.
2. Figueiredo, A. A., & Lucon, A. M. (2008). Urogenital tuberculosis: update and review of 8961 cases from the world literature. *Reviews in urology*, 10(3), 207-217.
3. Amir-Zargar, M. A., Yavangi, M., Ja'fari, M., & Mohseni, M. J. (2004). Primary tuberculosis of glans penis: a case report. *Urology journal*, 1(4), 278-279.
4. Nimisha, E., & Gupta, G. (2014). Penile lupus vulgaris: a rare presentation of primary cutaneous tuberculosis. *International journal of STD & AIDS*, 25(13), 969-970.
5. Gangalakshmi, C., & Sankaramahalingam (2016). Tuberculosis of Glans Penis- A Rare Presentation. *Journal of clinical and diagnostic research:* JCDR, 10(12), 05-06.
6. Angus, B. J., Yates, M., Conlon, C., & Byren, I. (2001). Cutaneous tuberculosis of the penis and sexual transmission of tuberculosis confirmed by molecular typing. Clinical infectious diseases: an official publication of the Infectious Diseases Society of America, 33(11), 132-134.
7. Savu, C., Surcel, C., Mirvald, C., Gîngu, C., Hortopan, M., et al. (2012). Atypical primary tuberculosis mimicking an advanced penile cancer. Can we rely on preoperative assessment? Romanian journal of morphology and embryology = *Revue roumaine de morphologie et embryologie*, 53(4), 1103-1106.
8. Jacob, J. T., Nguyen, T. M., & Ray, S. M. (2008). Male genital tuberculosis. The Lancet. Infectious diseases, 8(5), 335-342.
9. Venyo A. K. (2015). Tuberculosis of the Penis: A Review of the Literature. Scientifica, 2015, 601624.
10. Tapsoba, A. K., Bibi, M., Traoré, T. M., Ayari, A., Ben Rhouma, S., et al. (2021). Primary tuberculosis of the glans penis: A rare presentation and review of literature. *Urology case reports*, 39, 101858.

DOI:10.31579/2690-4861/495