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Total Penectomy and Perineal Urethrostomy Management of Penile Papillary Squamous Cell Carcinoma at Katihar Medical College and Hospital (Single Centre): A Rare Case Report

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Abstract

Penile squamous cell carcinoma (SCC) is a rare malignancy, particularly in developed regions, but remains a significant health issue in certain developing areas. This case report describes the clinical management of a 55-year-old male patient diagnosed with penile papillary squamous cell carcinoma at Katihar Medical College and Hospital. The patient presented with a non-healing ulcer on the glans penis, which progressed to an ulcer-proliferative mass. A thorough clinical examination and histopathological analysis confirmed the diagnosis, staging the disease as Jacksonian stage II and TNM stage T2 N0 M0. The patient underwent total penectomy with perineal urethrostomy, a procedure necessary due to the advanced nature of the lesion. The postoperative course was uneventful, with the patient recovering well and maintaining satisfactory urinary function. This case highlights the importance of early diagnosis, appropriate surgical intervention, and the need for a multidisciplinary approach to managing advanced penile SCC.

Keywords: Penile squamous cell carcinoma, Total penectomy, Perineal urethrostomy, Case report.

Introduction

Penile squamous cell carcinoma (SCC) is an uncommon malignancy, constituting less than 1% of all male cancers and 0.1% of all cancer-related deaths among men in the developed world [1]. However, its incidence is relatively higher in certain developing regions, such as South America, Africa, and parts of Asia, where it can account for up to 10% of male cancers. The etiology of penile SCC is multifactorial, with risk factors including poor hygiene, phimosis, human papillomavirus (HPV) infection, smoking, and chronic inflammatory conditions [2,3].

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The clinical presentation of penile SCC varies, often starting as a small lesion on the glans or foreskin, which may progress to an exophytic mass or ulcerative lesion if not treated early. Diagnosis is typically based on clinical examination and confirmed through histopathological evaluation of biopsy specimens [4]. Given the sensitive nature of the disease location, delayed presentation is common, often due to patients' reluctance to seek medical attention for genital symptoms. This delay can lead to more advanced disease at the time of diagnosis, necessitating more aggressive treatments [5].

Penile SCC primarily spreads through lymphatic channels to the inguinal and pelvic lymph nodes. Metastatic spread is relatively uncommon at initial presentation but can occur in advanced stages. The prognosis of penile SCC is closely related to the stage of the disease at diagnosis, with early-stage cancers having a favorable outcome when treated promptly [6].

Surgical treatment remains the cornerstone of management for penile SCC. The type of surgical intervention depends on the extent of the disease, ranging from organ-sparing procedures for small, localized lesions to partial or total penectomy for more advanced cases [7]. Total penectomy with perineal urethrostomy is typically reserved for patients with extensive disease involving the glans, shaft, or both, where organ preservation is not feasible. This procedure involves the complete removal of the penile tissue and the creation of a new urinary outlet through the perineum [8].

This case report describes the management of a 55-year-old male patient diagnosed with penile papillary squamous cell carcinoma at Katihar Medical College and Hospital. The patient presented with a non-healing ulcer on the glans penis, which had progressively enlarged over one year. Due to the advanced nature of the lesion, total penectomy and perineal urethrostomy were performed. This report aims to highlight the clinical presentation, surgical management, and postoperative outcomes of this rare and challenging condition, contributing to the limited literature on penile SCC in the context of a single-center experience in a developing region.

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Understanding the nuances of managing penile SCC, especially in resource-limited settings, is crucial for improving patient outcomes. This detailed case study provides insights into the effective surgical management of advanced penile SCC and underscores the importance of early diagnosis and treatment. By sharing this experience, we aim to contribute to the body of knowledge that can aid clinicians in making informed decisions for similar cases in their practice.

Methodology

This case report details the clinical management of a patient diagnosed with penile papillary squamous cell carcinoma at the Department of General Surgery, Katihar Medical College and Hospital. The methodology encompasses the patient's clinical presentation, diagnostic workup, surgical intervention, and postoperative care.

Patient Selection

The subject of this case report is a single patient, a 55-year-old male named Baidya Nath Sarkar, a farmer from Dinajpur, West Bengal. The patient presented to our department with a history of a non-healing ulcer on the glans penis that had persisted for one year, progressively worsening over the past six months.

Clinical Presentation

The patient's clinical history was meticulously documented, including:

- Chief Complaints: Non-healing ulcer over the tip of the penis for one year, inability to retract the prepuce for eight months, and proliferative growth over the past six months.

- History of Present Illness: The patient noticed a red velvety ulcer on the tip of the penis one year ago, which was painless and insidious in onset. Over time, the ulcer gradually increased in size and developed into an irregular mass. There was occasional blood-tinged, foul-smelling discharge from the ulcer, and pain developed three months before presentation, which was manageable with medication.

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- Past Medical History: The patient had no significant past medical history, including no history of fever, burning micturition, hematuria, trauma, or lymph node enlargement. He underwent circumcision seven months ago due to phimosis.

- Personal History: The patient was a non-smoker and non-alcoholic with normal bladder and bowel habits. He reported no weight loss and had a normal sleep pattern and appetite. He had no history of multiple sexual partners or unprotected sex.

Physical Examination

A thorough physical examination was conducted, including general and local examination:

- General Examination: The patient was conscious, coherent, and well-oriented. He was moderately built with mild pallor and bilateral mild pedal edema. Vital signs were stable, with a pulse of 78/min, blood pressure of 120/80 mmHg, temperature of 99°F, and respiration rate of 18/min.

- Local Examination: An irregularly shaped ulcero-proliferative mass involving the glans penis, extending from the urethral meatus distally to the coronal sulcus proximally, was observed. The mass had an uneven surface with patches of white flakes, irregular margins, and everted edges. The floor of the ulcer was covered with necrotic tissue, and there was intermittent blood-stained purulent discharge. The scrotum, testis, and perineum appeared normal, with no palpable inguinal lymph nodes.

Diagnostic Workup

- Histopathological Examination: A biopsy of the edge of the ulcer was performed. The histopathological examination confirmed the diagnosis of well-differentiated squamous cell carcinoma.

- Staging: The patient was staged according to the TNM classification, and the provisional diagnosis was Jacksonian stage II and TNM stage T2 N0 M0.

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Surgical Intervention

Given the advanced nature of the disease, a decision was made to perform a total penectomy with perineal urethrostomy. The surgical procedure involved:

1. Total Penectomy: Complete removal of the penile tissue was performed due to the extensive involvement of the glans and shaft.

2. Perineal Urethrostomy: A new urinary outlet was created through the perineum to ensure the patient could void urine effectively postoperatively.

Postoperative Care

Postoperative care included:

- Monitoring: The patient was closely monitored for any signs of complications such as infection, bleeding, or issues with the new urethrostomy.

- Medication: Antibiotics and pain management were administered to prevent infection and manage postoperative pain.

- Follow-Up: The patient was scheduled for regular follow-up visits to monitor healing and assess for any recurrence of the disease.

Outcome Measurement

The success of the surgical intervention was evaluated based on the following criteria:

- Postoperative Recovery: The patient's recovery was uneventful, with no immediate postoperative complications.

- Histopathological Results: Confirmation of complete excision of the cancerous tissue.

- Long-Term Follow-Up: The patient’s quality of life and functionality post-surgery, including urinary function through the perineal urethrostomy.

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Ethical Considerations

Informed consent was obtained from the patient for the procedure and the inclusion of his medical data in this case report. The ethical standards of the institution and the Helsinki Declaration conducted the study.

Results

The clinical management and surgical intervention of a 55-year-old male patient with penile papillary squamous cell carcinoma are detailed below. The patient's progression, diagnostic findings, surgical outcomes, and postoperative status are comprehensively documented.

Patient Details and Clinical Presentation

Parameter	Details
Name	Baidya Nath Sarkar
Age/Sex	55 years / Male
Occupation	Farmer
Residence	Dinajpur, West Bengal
Religion	Hindu
Chief Complaint	Non-healing ulcer over the penis
Duration of Symptoms	1 year
Proliferative Growth Duration	6 months
Inability to Retract Prepuce	8 months
Past Medical History	No significant past medical history
Personal History	Non-smoker, Non-alcoholic

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History of Present Illness

Parameter	Details
Initial Presentation	Red velvety ulcer on the glans penis
Pain	Initially painless, pain developed 3 months ago
Growth	Gradually increased in size, irregular mass
Discharge	Occasional blood-tinged, foul-smelling discharge
Previous Surgery	Circumcision 7 months ago due to phimosis

Physical Examination

General Examination	Local Examination
Conscious and coherent	Irregularly shaped ulcero-proliferative mass
Moderately built, mild pallor	Involving the glans penis and distal shaft
Bilateral mild pedal edema	Uneven surface with white flakes, everted edges
Vital Signs Stable	Necrotic tissue covering the ulcer floor
No lymph node enlargement	No palpable inguinal lymph nodes

Diagnostic Workup

Parameter	Result
Histopathological Examination	Well-differentiated squamous cell carcinoma
Staging	Jacksonian stage II, TNM stage T2 N0 M0

Surgical Intervention

Procedure	Details
Total Penectomy	Complete removal of the penile tissue
Perineal Urethrostomy	Creation of a new urinary outlet through the perineum

Postoperative Course and Follow-Up

The postoperative period was uneventful with no immediate complications. The patient was monitored closely for any signs of infection, bleeding, or issues with the new urethrostomy. Pain management and antibiotics were administered as part of the standard postoperative care. The patient reported no significant pain or discomfort during the recovery period.

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Histopathological Examination Post-Surgery

Parameter	Result
Tumor Margins	Clear
Lymphovascular Invasion	Absent
Perineural Invasion	Absent
Surgical Margins	Negative for malignancy

Long-Term Follow-Up

The patient was followed up regularly to monitor healing and assess for any recurrence of the disease. At each follow-up visit, the patient reported satisfactory urinary function through the perineal urethrostomy and had no signs of recurrence or metastasis.

Follow-Up Period	Findings
1 Month	No complications, normal healing
3 Months	No signs of recurrence, good urinary function
6 Months	Stable condition, no recurrence
12 Months	Continued normalcy, no signs of metastasis

Penile squamous cell carcinoma, though rare, poses significant treatment challenges, particularly in resource-limited settings. Early diagnosis and prompt intervention are crucial for improving patient outcomes. In this case, total penectomy with perineal urethrostomy provided effective oncological control while maintaining the patient's quality of life. The patient's positive outcome underscores the importance of a multidisciplinary approach to managing advanced penile SCC.

Discussion

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Penile squamous cell carcinoma (SCC) is a rare but significant malignancy that poses unique challenges in diagnosis and treatment. The rarity of the disease, coupled with social stigma and delayed presentation, often leads to advanced stages at the time of diagnosis. This case report of a 55-year-old male patient at Katihar Medical College and Hospital highlights the critical aspects of managing advanced penile SCC through surgical intervention. The patient presented with a non-healing ulcer on the glans penis, which had progressed to an ulcer-proliferative mass over the past six months [11]. The progression of the disease and the patient's inability to retract the prepuce underscored the need for timely medical attention. Penile SCC typically presents with a range of symptoms from small lesions to large exophytic masses. The painless nature of early lesions often leads to delayed diagnosis. In this case, the lesion's transformation into a painful, irregular mass with intermittent discharge prompted the patient to seek medical help [12].

Histopathological examination remains the gold standard for diagnosing penile SCC. The biopsy confirmed well-differentiated squamous cell carcinoma, enabling the clinical team to stage the disease accurately and plan the appropriate surgical intervention. The patient was classified as Jacksonian stage II and TNM stage T2 N0 M0, indicating a localized but advanced disease without nodal involvement or metastasis [13]. Total penectomy with perineal urethrostomy was chosen as the surgical approach due to the extensive involvement of the glans and distal shaft. This procedure, although radical, is often necessary for achieving oncological control in advanced cases. Total penectomy involves the complete removal of the penile tissue, which is essential when the tumor extends beyond the glans to prevent local recurrence [14].

Perineal urethrostomy is performed to create a new urinary outlet, ensuring that the patient maintains urinary function post-surgery. This approach also helps in reducing the psychological impact associated with penile amputation by preserving the ability to void normally. The postoperative period was uneventful, with no immediate complications such as infection or bleeding. The patient's recovery was smooth, and he reported satisfactory urinary function through the perineal urethrostomy during follow-up visits. The absence of lymphovascular and perineural invasion in the histopathological examination of the excised specimen further indicated a favorable prognosis [15].

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Long-term follow-up is crucial in monitoring for any signs of recurrence or metastasis. The patient remained disease-free at each follow-up visit up to 12 months post-surgery, suggesting that the surgical intervention successfully managed the disease. This case underscores the importance of early detection and timely surgical intervention in managing penile SCC. Raising awareness about the disease and encouraging early medical consultation can significantly improve outcomes in resource-limited settings. The multidisciplinary approach involving surgeons, pathologists, and oncologists is essential for optimal management of penile SCC.

Future research should focus on improving diagnostic techniques, exploring less invasive treatment options, and understanding the molecular biology of penile SCC to develop targeted therapies. Additionally, addressing the psychosocial aspects of the disease, particularly in conservative societies, can aid in reducing the stigma associated with penile cancer and encourage early diagnosis and treatment.

Conclusion

The management of penile papillary squamous cell carcinoma through total penectomy and perineal urethrostomy at Katihar Medical College and Hospital was successful, providing a valuable case study in treating this rare malignancy. Early diagnosis, accurate staging, and appropriate surgical intervention are critical for favorable outcomes. This case highlights the need for continued education, research, and multidisciplinary collaboration to enhance the management of penile SCC and improve patient prognosis. This case report highlights the successful management of penile papillary squamous cell carcinoma through total penectomy and perineal urethrostomy. The patient’s recovery and long-term follow-up indicate that this surgical approach can effectively treat advanced penile SCC, providing valuable insights for clinicians managing similar cases.

Operative Procedure

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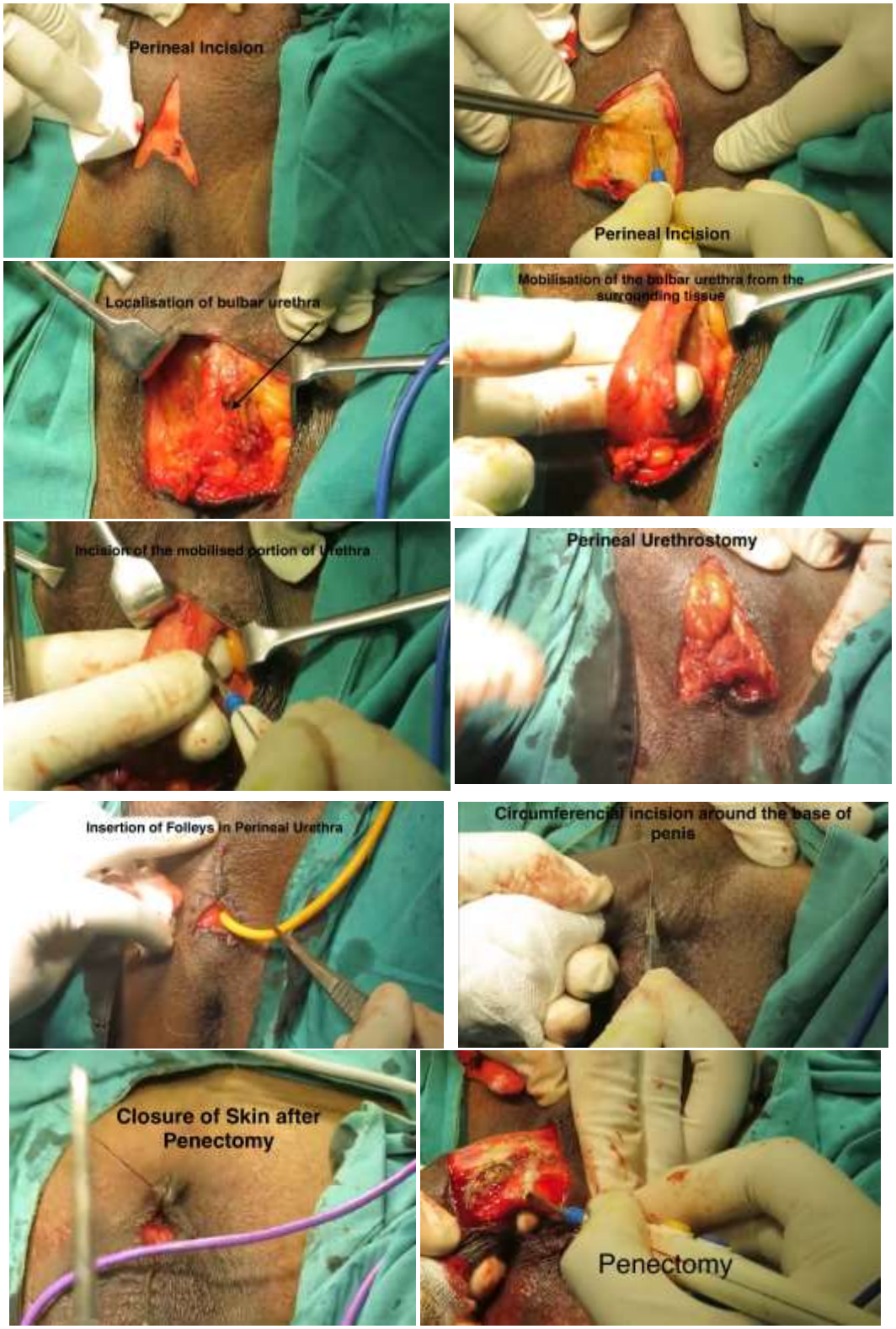

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Preoperative and Postoperative Images:

References

1. Chaux A, Velazquez EF, Algaba F, et al. Histologic classification of penile carcinoma and its relationship with outcome. Adv Anat Pathol. 2011.

2. Graafland NM, Lam W, Leijte JAP, et al. Prognostic factors in squamous cell carcinoma of the penis. J Urol. 2010.

3. Koifman L, Hampl D, Koifman N, et al. Radical prostatectomy: long-term cancer control and recovery of sexual and urinary function. Clin Oncol (R Coll Radiol). 2012.

4. Mosconi AM, Roila F, Gatta G, et al. Cancer of the penis. Crit Rev Oncol Hematol. 2005.

5. Najeeb U, Mazhar R, Ather MH. Impact of penectomy on the quality of life of patients with penile carcinoma. Int J Impot Res. 2012.

6. Shabbir M, Minhas S. Surgical management of penile cancer. BJU Int. 2010.

7. Spiess PE, Correa AF, Pettaway CA. Contemporary management of penile cancer. Cancer Control. 2016.

8. Wang Y, Ma Z, Li Q, et al. Penile carcinoma treated with penectomy: clinical outcome and quality of life. J Cancer Res Clin Oncol. 2013.

9. Wein AJ, Kavoussi LR, Partin AW, et al. Campbell-Walsh Urology. 11th ed. Elsevier; 2016.

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10. Zou Z, Tang W, He Y. Penile squamous cell carcinoma: an analysis of 581 cases. J Urol. 2015.

11. Bhagat SK, Choudhary GR, Gupta P. Perineal urethrostomy: surgical technique and outcomes. Indian J Urol. 2010.

12. Pandey D, Mahajan V, Kannan RR. Penile cancer: a clinicopathological study of 45 cases. Indian J Cancer. 2016.

13. Santucci RA, McAninch JW. Penile cancer. Curr Opin Urol. 2001.

14. Cabanas RM. An approach for the treatment of penile carcinoma. Cancer. 1977.

15. Lopes A, Bezerra AL, Pinto CA, et al. Prognostic factors in carcinoma of the penis: multivariate analysis of 145 patients treated with amputation and lymphadenectomy. J Urol.

1996.