



A Clinicopathological Study of Penile Carcinoma in a Tertiary Care Hospital, Visakhapatnam

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Abstract

Background: *One of the countries with the highest incidence of penile cancer in the world is India, with rates up to 3.32 per 100 000 men in some regions. The vast majority of patients have an apparently localized disease at diagnosis, with high-risk characteristics for nodal involvement but without clinical evidence of such involvement. This suggests that the morbidity and mortality among these patients is underestimated.*

Materials and Methods: *A retrospective study was conducted on 30 cases of carcinoma penis in the Department of General Surgery, King George Hospital, Visakhapatnam, from June 2018 to June 2020. Patients presenting with symptoms suggestive of carcinoma penis were admitted, investigated using routine investigations, and USG/CT scan, and managed during this period. Factors studied were incidence among age, demography, time of presentation, presenting complaints, stage of presentation, and treatment options available in our setup.*

Results: *Out of 30 subjects, 14(46.66%) are aged above 60 yrs, 10(33.33%) are between 30 - 44yrs, 6(20%) are between 45 - 59yrs. 10(20%) subjects presented with phimosis. 20 subjects are smokers. Stage of presentation: STAGE 0: 4 (13.33%), STAGE 1 : 6 (20%) ,STAGE 2 : 6 (20%), STAGE 3A : 2(6.66%),STAGE 3B : 8(26.66%),STAGE 4: 4 (13.33%). Lymph nodal involvement is noted in 12(40%) cases. Carcinoma insitu 4 (13.33%), Well differentiated squamous cell carcinoma 12 (40%), Moderately differentiated squamous cell carcinoma 12 (40%), spindle cell carcinoma 2 (6.66%). Penectomy alone (Total/Partial): 20(66.66%) cases. Penectomy with inguinal block dissection (Unilateral/Bilateral): 8(26.66%) cases. Chemoradiation: 2(6.66%) cases*

Conclusion: *Though the disease condition is rare in younger populations it's not uncommon in developing nations. Early diagnosis and treatment significantly reduce the morbidity. Lack of awareness and social stigmas plays key role in delayed presentation. Active surveillance and awareness programs help in reducing the disease burden. Smoking, as in many diseases, is a significant risk factor for carcinoma penis, its usage should be condemned*

Keywords: *penile cancer, phimosis, squamous cell carcinoma, penectomy.*

Introduction

One of the countries with the highest incidence of penile cancer in the world is India, with rates up to 3.32 per 100 000 men in some regions. In contrast, rates among Jewish men born in Israel are reportedly very close to zero⁽²⁾ Penile cancer typically affects older men, and its incidence rate consistently increases with age⁽³⁾ although the disease has also been observed in patients under 40 years⁽³⁾ The vast majority of patients have an apparently localized disease at diagnosis, with high-risk characteristics for nodal involvement but without clinical evidence of such involvement. This suggests that the morbidity and mortality among these patients is underestimated⁽⁵⁾ The risk factors associated with a greater likelihood of developing the disease, as well as the factors associated with higher incidence rates, are clearly known⁽⁶⁾ Cigarette smokers are noted to be 3.0 to 4.5 times more likely to develop penile cancer^(7,8) Early diagnosis is of utmost importance, because this disease can result in devastating disfigurement and has a 5-year survival rate of approximately 50% (>85% for patients with negative lymph nodes and 29%-40% for patients with positive nodes, with the lowest survival rates at 0% for patients with pelvic lymph node (PLN) involvement)⁽⁹⁾

Aims and Objectives

1. To identify the most common age group involved
2. To identify risk factors, histology, stage of presentation

Materials and Methods

A retrospective study was conducted on 28 cases of carcinoma penis in the Department of General Surgery, King George Hospital, Visakhapatnam, from June 2018 to June 2020. None of the patients were given radiation or chemotherapy before biopsy or excision. Patients presenting with symptoms suggestive of carcinoma penis were admitted, investigated using routine

investigations, and USG/CT scan, and managed during this period. Factors studied were incidence among age, demography, time of presentation, presenting complaints, stage of presentation, and treatment options available in our setup. Based on the tumor respectability, treatment options like resection of primary tumor or palliative resection with or without perineal urethrostomy, were considered.

Inclusion Criteria

Patients with carcinoma penis confirmed on histopathology are included

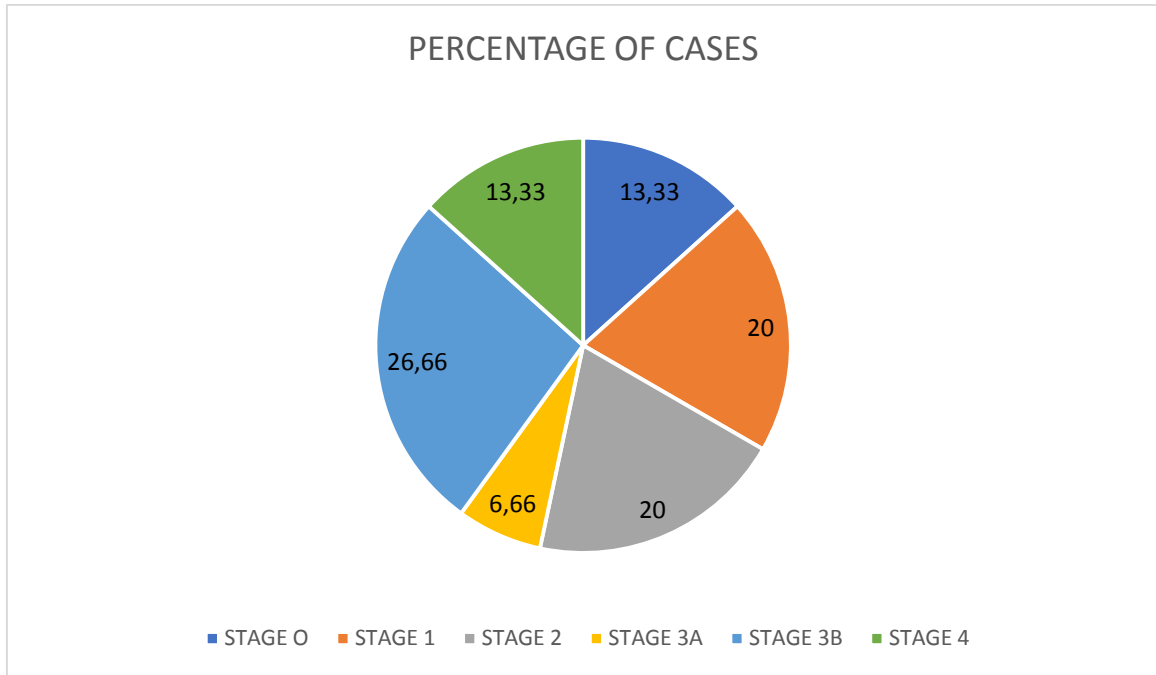
Results

Out of 30 subjects

Age of presentation (in years)	No. of subjects
30-40	10
40-50	4
50-60	2
60 and above	14

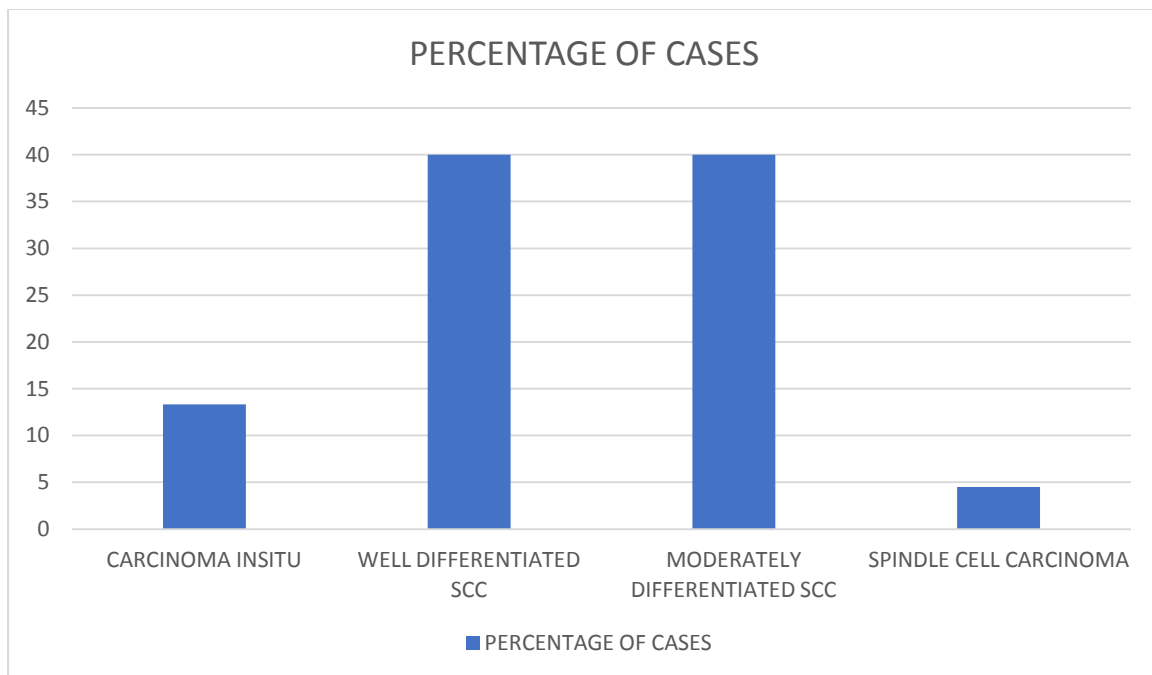
The mean time between appearance of first symptom and the first consultation was **5.28 months**.10(20%) subjects presented with phimosis.20 subjects are smokers.

Stage of presentation:: STAGE 0 : 4 (13.33%),STAGE 1 : 6 (20%),STAGE 2 : 6 (20%),STAGE 3A : 2(6.66%),STAGE 3B : 8(26.66%),STAGE 4: 4(13.33%)



Lymph node involvement is noted in 12(40%) cases

Histopathology: Carcinoma insitu 4 (13.33%), carcinoma 12 (40%), spindle cell carcinoma 2 (6.66%), Well differentiated squamous cell carcinoma 12 (40%), Moderately differentiated squamous cell



Treatment: Out of 30 cases in the study Penectomy alone (Total/Partial) was done in 20(66.66%) cases. Penectomy with inguinal block dissection (Unilateral/Bilateral) done in 8(26.66%) cases. Palliative Chemoradiation was given in 2(6.66%) cases.

Discussion

Penile carcinoma is a neoplasm which mostly affects elderly patients; the usual age for this type of tumour is between the 6th and 7th decade of life⁽¹⁾. In our study similar results are noted with significant number of cases in 4th decade of life. The mean time between appearance of first symptom and the first consultation was 5.28 months, data similar to other studies. Significant delay in consultation is noted in elderly population groups which may be attributed to lack of awareness and illiteracy.

The characteristic form of presentation is an ulcerated lesion, followed by infiltrating/deep lesion and papillary or verrucous lesion⁽¹⁰⁾. In our study majority of the cases presented with ulceroproliferative lesion involving glans. Two cases presented with involvement of prepuce. Two cases presented with involvement of root of penis. This is similar to the review by Diz Rodr`iguez et al.⁽¹⁸⁾ but different to the localization reported in other series, where the prepuce was found to be the most common site⁽¹⁹⁾ 10(33.33%) subjects presented with phimosis and 4 patients had been circumcised sometime in their lives. 20(66.66%) subjects are smokers.

At the time of diagnosis of the initial lesion, around 50% of patients have palpable inguinal adenopathies; of these, only half will be tumours as penile cancer is usually infected and causes inflammatory adenopathies^[12]. In our study, 40% (12 cases) had adenopathies at the time of diagnosis, data similar to other published series; however, it was due to an inflammatory process in only 20% (6 cases). Among the 8 patients in whom lymphadenectomy was performed, lymph node infiltration was demonstrated in 6 cases.

The most common histopathological type was squamous cell carcinoma in its various forms of presentation^[11]. In our study 93.33% of cases are squamous cell carcinoma, this is similar to the study of G. Pizzocaro et al. Spindle cell carcinoma or Sarcomatoid carcinoma is seen in 2 cases. Although there is a push for functional penile-sparing treatments such as RT in the literature,

partial and total penectomy continues to remain prevalent in clinical practice⁽¹³⁾. Local recurrence after adequate partial penectomy is uncommon and ranges from 0% to 7%⁽¹⁴⁻¹⁶⁾. These recurrences are best managed by total penectomy. Wedge resection has a local recurrence rate of up to 50%⁽¹⁷⁾. Inclination towards performing radical procedures rather than penile sparing treatments are noted in developing nations like India. Out of 30 cases in the study Penectomy alone (Total/Partial) was done in 20(66.66%) cases. The presence of proven inguinal lymph-node metastasis substantially worsens the prognosis in penile cancers. Lymphadenectomy is curative in about 50% of cases and should be undertaken. Penectomy with inguinal block dissection (Unilateral/Bilateral) done in 8(26.66%) cases. Palliative Chemoradiation was given in 2(6.66%) cases.

Conclusion

Though the disease condition is rare in younger populations its not uncommon in developing nations. Early diagnosis and treatment significantly reduce the morbidity. Lack of awareness and social stigmas plays key role in delayed presentation. Active surveillance and awareness programs help in reducing the disease burden. Smoking, as in many diseases, is a significant risk factor for carcinoma penis, its usage should be condemned

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