

# Carcinoma of penis in India: A study of 50 cases

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## Abstract

**Background:** Carcinoma of the penis is quite common in our country. Its incidence may be linked to racial, cultural, and socioeconomic factors. In view of this, it would be interesting to study the incidence, behavior of the lesion, relationship of the disease with circumcision, genital hygiene, social status, and so on.

**Objectives:** We studied the incidence, behavior of lesion, relationship of the disease with circumcision, genital hygiene and so on. We also studied different treatment options and outcomes. We compared the results with those of other well-known works on this subject.

**Material and Methods:** This study included biopsy-proven 50 cases of epidermoid carcinoma of the penis.

**Results:** Phimosis is one of the commonest predisposing factors. Of 50 patients, 25 were well at the time of follow-up. In six cases, the diseases had progressed or remain stable. Fourteen patients died. Of 25 patients, 9 were well for 6 months to 3 years. Six patients were alive without any evidence of metastasis or recurrence for 3–5 years and 10 patients for more than 5 years.

**Conclusion:** The penile cancer is a preventable disease. The custom of early circumcision in male infant must be adopted as a prophylactic measure, particularly in those with phimosis. General public should be educated about genital hygiene.

**KEY WORDS:** Carcinoma penis, phimosis, circumcision, surgery

## Introduction

Cancer,<sup>[1]</sup> a disease that has posed the greatest challenge to the mankind for centuries, has been a subject of ever-increasing interest to medical personnel, much more to a surgeon. The statistical data suggest that the incidence of the cancer is almost the same in most of parts of the world.<sup>[2]</sup> However, organ distribution often varies, for example, cancer of the penis is common in Hindus, rare in Muslims, and almost unknown in Jews.<sup>[3]</sup> Carcinoma of the penis is quite common in our country. The incidence may be linked to racial, cultural, and socioeconomic factors.<sup>[4]</sup> In view of this, it would be interesting to study the incidence, behavior of lesion, relationship of the disease with circumcision, genital hygiene, social status and so on.

## Material and Methods

This study includes biopsy-proven 50 cases of epidermoid carcinoma of penis. All cases were studied under the definitive plan that included evaluation of general history and local examination. All routine and specific laboratory and radiological investigation were carried out. The treatment options were divided into surgical, radiotherapy, and chemotherapy. The outcome was in the form of alive or dead. We study the incidence, behavior of lesion, relationship of the disease with circumcision, genital hygiene and so on. We also study the different treatment options and outcome of the patients. We compare the results with those of other well-known works on this subject.

## Results

The important observation is the remarkably high incidence at a younger age.

Most of the patients were presented with growth on the penis. Other symptoms such as foul smell purulent discharge and inability to retract the prepuce were present.

The majority of patients had reported after a delay of 1–6 months.

Most of patients were treated by surgery and some of them received radiotherapy to the inguinal lymph nodes.

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**Table 1:** Age distribution

Age (years)	No of patients
<20	2
21–30	7
31–40	10
41–50	11
51–60	9
61–70	7
71–80	4
81 and above	0
Total	50

Of 50 patients, 25 were well at the time of follow-up. In six cases, the diseases had progressed or remain stable. Fourteen patients died. Of 25 patients, 9 patients were well for 6 months to 3 years. Six patients were alive without any evidence of metastasis or recurrence for 3–5 years and ten patients for more than 5 years.

## Discussion

Carcinoma of the penis, although rare in Western countries, is common in eastern countries, particularly in India.<sup>[5]</sup> Various incidences have been reported, from as high as 20% to as low as 0.02%.<sup>[6]</sup> It is very difficult to explain the differences in incidence in different parts of the world. The most important factor in cancer formation is the huge difference in the susceptibility of cells in different classes, races, and individuals.<sup>[7]</sup> The peak age of incidence is fourth, fifth, and sixth decades of life.<sup>[8]</sup> It is also not unusual among individuals below the age of 40 years, particularly in colored races. The disease is rare in Muslims and Jews as they are circumcised in childhood.<sup>[9]</sup> The disease is said to occur in lower strata of society.<sup>[10]</sup> This is because of lack of genital hygiene and lack of proper facilities to maintain genital hygiene.<sup>[11]</sup> Penile cancer is very common in uncircumcised patients and especially in those with phimosis.<sup>[12]</sup>

**Table 2:** Symptomatology

Presenting symptom	No of patients
Ulcerated growth	31
Nodular growth	15
Foul smelling discharge	26
Itching or burning	11
Pain	07
Inability to retract the prepuce	20
Difficulty in micturition	08
Whitish patch on the penis	01
Swelling in the inguinal region	12
Bleeding from the growth	07
Paraphimosis	01
Loss of weight and appetite	19

**Table 3:** Period of delay in reporting

Delay in reporting	No of patients
<1 month	05
1–3 months	22
4–6 months	11
7–9 months	02
10–12 months	04
1–2 years	04
>2 years	02
Total	50

Embryologically, the penis and the clitoris have same development. But clinically, carcinoma of the clitoris is rare as when compared to that of the penis. This indicates that there should some external factor responsible for it. The presence of phimosis makes the prepuce covering a storehouse for the collection of smegma, which produces a constant mechanical and chemical irritation on the glans and the inner surface of the prepuce. Human smegma has been shown to produce carcinoma of cervix in experimental mice.<sup>[13]</sup> Circumcision to be effective against penile cancer must be carried out in the first 10 days of life because the occult cancerous changes may become established early.<sup>[14]</sup> When an infant is circumcised and the glans is no longer protected by prepuce, a dense thicker epidermis develops, which resists the formation of cancer by chronic irritation. However, when the circumcision is performed in later years, the glans may have lost its ability to produce such a resistant covering, and although there is no longer irritation from retained smegma, the glans may remain relative sensitive to the contacts of everyday life. In any study of the cases of carcinoma of the penis, two observations are striking: (1) the uncommon occurrence in races in which ritual circumcision is performed, and (2) high incidence of phimosis. Conditions such as leukoplakia,<sup>[15]</sup> erythroplasia of Queyrat,<sup>[16]</sup> Bowen's

**Table 4:** Treatment

Treatment	No of patients
Local excision and or circumcision	3
Partial amputation	18
Partial amputation and block dissection	1
Partial amputation and radiotherapy	2
Radiotherapy	1
Radiotherapy and block dissection	0
Total amputation	13
Total amputation and block dissection	2
Total amputation and radiotherapy	3
Total amputation and block dissection and radiotherapy	1
Patient refuses	6
Total	50

disease,<sup>[17]</sup> and Paget's disease<sup>[18]</sup> are considered to be precancerous lesions. Most of the patients have main complain of growth on the penis.

Patients have reported comparatively earlier in this study, but it was still late as the organ is easily visualized and palpated many times a day. The delay in reporting is probably due to following reasons: (1) most of patients are coming from rural areas and are laborers or farmers. It is difficult for them to come to the hospital or consult a qualified doctor as it affects their daily wage earning and entails the additional financial burden. (2) Patients tend to hide the lesion during the early stage because of social stigma. (3) Mistaken belief. The growth commonly starts on the glans because of greater sensitivity to irritation by smegma.

The prognosis depends on the many factors such as the type of the lesion, time interval passed before the start of treatment, lymph node enlargement, histological grading, and stage of the disease.<sup>[19]</sup> It is best when treatment is started early. The treatment options are surgery and or radiotherapy. Surgical procedures include (1) local excision or circumcision, (2) partial amputation, (3) total amputation, or (4) block dissection.<sup>[20]</sup> Immediate complications following surgery are hemorrhage, edema of legs and scrotum, sloughing of skin flaps, wound sepsis, cystitis, and stricture of urethra. Wound sepsis was found to be the most common complication in this study.

## Conclusion

The surgery is quite satisfactory when lesion is limited to the organ proper. The organ being accessible, an early diagnosis is possible if patients are made cancer conscious. The patients should be explained about the importance of periodical checkup. The penile cancer is a preventable disease.<sup>[21]</sup> The custom of early circumcision in male infant must be adopted as a prophylactic measure, particularly in those with phimosis. General public should be educated about genital hygiene.

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