

Surgical Management of Primary Scrotal Cancer



Jonathan H. Huang, MD*, Matt Broggi, MSc, Adeboye O. Osunkoya, MD, Viraj A. Master, MD, PhD

KEYWORDS

- Scrotal cancer • Squamous cell carcinoma • Extramammary Paget's disease • Sarcoma
- Basal cell carcinoma • Melanoma • Adnexal skin tumor

KEY POINTS

- Wide surgical excision is recommended for localized scrotal cancer.
- Reconstruction of the defect can be performed with primary closure, skin grafts, or flaps.
- High-risk scrotal cancer has a poor prognosis, with a decreased overall survival compared with penile cancer.

INTRODUCTION

Percival Pott, the 18th-century English surgeon, is credited as the first to associate an occupational exposure to the ensuing development of disease.¹ Cases of squamous cell carcinoma of the scrotum, known colloquially as chimney sweep's carcinoma, were seen almost exclusively in England among young men who worked as chimney sweepers.² Sweeps, as they were called, were forced to work in dirty conditions and many times worked while naked to fit into tight spaces. This led to the overexposure of coal on the genitals and the subsequent development of soot warts and cancer, if left untreated. More recently, polycyclic aromatic hydrocarbons in the soot were discovered to be the causative agent of this disease and steps were taken to protect workers.³ As occupational exposure has decreased, so has the incidence of scrotal cancer, which makes studying this virulent malignancy much more difficult.

Primary scrotal cancers are rare, with the majority of the literature being composed of small case series. Johnson and colleagues⁴ evaluated the Surveillance, Epidemiology, and End Results database for scrotal cancer patients and found that histologies included squamous cell carcinoma (35.1%), extramammary Paget's disease (21.9%),

sarcoma (20.4%), basal cell carcinoma (16.7%), melanoma (3.3%), and adnexal skin tumors (2.6%). The median (95% CI) overall survival for localized low-risk scrotal cancers (basal cell carcinoma, extramammary Paget's disease, sarcoma) and localized high-risk scrotal cancers (melanoma, squamous cell carcinoma, adnexal skin tumors) was 166 (145–188) and 118 (101–135) months, respectively. Patients with regional and distant disease are reported to have worse overall survival.^{5,6}

Diagnosis requires an excisional biopsy of the lesions to determine the underlying histology of the scrotal cancer. Evaluation of nonlocalized disease and metastases can be performed through careful physical examination and cross-sectional imaging modalities such as computed tomography scanning or MRI. PET should be regarded as investigational. Treatment for all histologies requires surgical removal of the malignancy. Adjuvant treatments, including radiation and chemotherapy may be warranted. Owing to the small number of reported cases, details in management and overall prognosis are limited. We discuss surgical management of primary scrotal cancers based on National Comprehensive Cancer Network guidelines, if present, and also expert opinion (**Box 1**).

Department of Urology, Emory University, 1365 Clifton Road Northeast, Suite B6140, Atlanta, GA 30322, USA

* Corresponding author.

E-mail address: jhhuan2@emory.edu

Urol Clin N Am 43 (2016) 531–544

<http://dx.doi.org/10.1016/j.ucl.2016.06.014>

0094-0143/16/© 2016 Elsevier Inc. All rights reserved.

Box 1**Indications and contraindications***Indications for Surgery*

Localized, resectable disease

Contraindications to Surgery

Nonmalignancy after biopsy

Metastatic disease

Comorbid conditions with poor prognosis

TECHNIQUE/PROCEDURE**Preparation****Scrotal anatomy**

The skin of the scrotum can be divided into an anterior and a posterior aspect, each with distinct neurovasculature. The anterior scrotum is supplied by the deep external pudendal arteries, which branch off the femoral artery and course medially into the scrotum. The posterior scrotum is supplied by the perineal arteries, which branch off the pudendal arteries. The vessels do not cross the median raphe and this allows for a relatively bloodless incision.

The anterior scrotal skin and the posterior scrotal skin have their own dedicated venous drainage that course along with their respective arterial supplies. The anterior surface is drained via the external pudendal veins and the posterior surface by the scrotal branches of the perineal vessels. The lymphatic drainage of the scrotum is supplied by the superficial inguinal lymph nodes for both the anterior and posterior sides. This differs from testicular lymphatics, which drain into the paraortic lymph nodes. The innervation of the scrotal skin is provided by the anterior scrotal

nerves, which are branches of the ilioinguinal nerve, and the posterior scrotal nerves, which are branches of the perineal nerve.

Preoperative prophylactic antibiotic and infection management

The American Urologic Association best practice policy guidelines on surgical antimicrobial prophylaxis of the scrotum recommends a single dose of preoperative antibiotics, particularly in patients with certain risk factors for infection (Table 1).⁷ This is owing, in part, to the scrotal surgical infection rate being comparatively low, ranging from 0% to 10%. The recommended prophylactic antibiotic of choice is a first-generation cephalosporin or clindamycin as an alternative.

Traditionally, hair has been removed preoperatively to reduce the risk of surgical site infections, although recent studies indicated that this may not be necessary. A recent analysis of randomized, controlled trials compared hair removal with no removal, the different methods of hair removal, as well as the different times of hair removal before surgery.⁸ No significant difference in surgical site infections was found among patients who had their hair removed and those who did not. In circumstances when removal of hair is necessary, using clippers instead of a razor is associated with fewer surgical site infections.

Patient Positioning

1. The patient should be placed in the exaggerated dorsal lithotomy position to provide visualization of the entire scrotum and adjacent regions, including the penis, suprapubic/inguinal regions, medial thigh, and perineum/perianal regions.

Table 1**Factors and results**

Factor	Result
Impaired natural defense mechanism	
Advanced age	Decreased natural defense mechanisms of the urinary tract and immune system
Anatomic anomalies of the urinary tract	
Poor nutritional status	
Smoking	
Chronic corticosteroid use	
Immunodeficiency	
Increase local bacterial concentration and/or spectrum of flora	
Externalized catheters	Increased local bacterial concentration and/or spectrum
Colonized endogenous/exogenous material	
Distant coexistent infection	
Prolonged hospitalization	

Download English Version:

<https://daneshyari.com/en/article/4274959>

Download Persian Version:

<https://daneshyari.com/article/4274959>

[Daneshyari.com](https://daneshyari.com)