



Case Report

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Three Decades Later: Case Report of a Scrotal Squamous Cell Carcinoma in A Tertiary Care Hospital in Pakistan

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ABSTRACT

Squamous Cell Carcinoma (SCC) of the scrotum has a considerably low incidence and is directly linked to exposure to occupational carcinogens. We present a case of an 80-year-old male patient with a long history of multiple painless swellings in the scrotum. The investigations showed the lesions confined to the skin with the involvement of some draining lymph nodes, and the histopathology came to be Scrotal Squamous Cell Carcinoma. Due to lymph node involvement, the lesions were of TNM (Tumor size, Nodal involvement, Distant Metastasis) staging 4 and Lowe's stage B. Wide surgical excision combined with radiotherapy was done. There is a lack of research about the disease worldwide and in Pakistan, which warrants further interest in optimizing diagnostics and therapeutics modalities and assessing geographical variation.

Introduction

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quamous Cell Carcinoma (SCC) of the scrotum is characterized as the most common malignancy of the scrotum, with an incidence of approximately 0.35 per 1 million males/year in the developed world [1]. Occupational exposure to carcinogenic

substances has been frequently associated with the development of scrotal SCC and an immunocompromised state of a patient due to increased susceptibility to Human Papilloma Virus (HPV) and Human Immunodeficiency Virus (HIV) infections [2, 3]. Steel industry workers, car mechanics, or those exposed to engine oil or recurrent exposure to carcinogenic polycyclic aromatic hydrocarbons are considered one of the major culprits of this disease process [4, 5].

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We describe a case of an 80-year-old male patient with squamous cell carcinoma of the scrotum presenting three decades after preliminary symptoms.

Case History

An 80-year-old male, a retired officer from Steel Mills who worked in the Human Resource department, presented with multiple painless swellings in the scrotal region for 35 years, which suddenly started increasing in size in the last two months before presentation. There was no history of previous lesions like warts. During these two months, the patient observed drying and shedding off tiny fragments of the swelling without any discharge or bleeding. There was no history of weight loss and familial carcinomas. The patient had not taken any treatment for these swellings before.

On examination, multilobulated, non-tender swellings are present on the posterolateral aspect of the left scrotum, at the medial part of the left thigh, and on the dorsal surface of the shaft of the penis. Each lobule ranged from 0.2 cm to 2 cm in size (Figure 1). Computed Tomography (CT) of the abdomen and pelvis demonstrated an exophytic heterogeneously enhancing fungating lesion involving the scrotum, and there were inguinal and abdominal lymphadenopathies (Figure 2). Testes appeared heterogenous suggestive of mild hydrocele bilaterally. CT chest was done for metastatic workup, which was normal. The skin tumor diagnosis was made on the clinical ground, and wide excision and biopsy were planned.

Wide excision and biopsy were performed by giving an elliptical incision around the swelling and the mass excised in its entirety along with normal skin margins. Primary wound closure was done with the remaining scrotal skin flap. Swellings on the dorsal surface of the penile shaft and the medial aspect of the thigh were also widely excised and closed (Figure 3). The histopathology of the scrotal mass, which measured about 15×12.5×4 cm in size, came to be well-differentiated squamous cell carcinoma and margins were tumor-free. Radiotherapy was also done according to the oncological recommendations. The patient followed up in Oxford picture dictionary (OPD) for one year. Post-op follow-up was unremarkable, and he responded well to radiotherapy.

Discussion

Scrotal SCC is a rare carcinoma with an initial decline in incidence due to advancing industrial practices and minimizing exposure to carcinogenic substances in the

workplace. The mean age of presentation is 55 years, with a wide range of deviation [6]. It usually presents with a painless solitary and slow-growing skin lesion with a tendency to grow towards the antero-inferior aspect of the scrotum unilaterally [7]. Our case was limited to the left side of the scrotum; however, it presented as multiple painless swellings in the posterolateral aspect of the scrotum extending to the medial thigh, and the penile shaft was in contact with the lesion.

According to Lowe's staging system, our patient had stage B scrotal SCC and stage IV according to TNM staging, as there was the involvement of inguinal lymph nodes but no evidence of distant metastasis [8]. The guidelines for the management of scrotal SCC are not accurately outlined. However, radiotherapy in patients involving lymph nodes has been shown to effectively downstage the lesion to be resectable, and wide surgical excision with the margin assessment is recommended [9]. The mass was resected in total, and with oncological assessment, adjuvant radiotherapy was advised for precautionary measures. Targeted intervention for scrotal SCC is severely lacking as low incidence, and a relatively variable five-year survival rate does not demand considerable research.

Due to the shortage of data on this subject, the prevalence of scrotal SCC beyond occupational exposure and rising rates since the 18th century has been gravely overlooked. Seemingly, this is the first reported case of scrotal SCC from Pakistan, possibly due to the indignity attached to the notion of having 'diseased genitalia' for either gender. Further research is warranted, as demographic variations, immunochemical markers, and genomic or molecular adaptations may be crucial to developing screening techniques and therapeutic interventions.

Guidelines suggest a five-year follow-up with no evidence of disease recurrence, but our patient has been disease-free for 1 year with continuing follow-up. Huang et al. demonstrated that scrotal SCC is a high-risk scrotal malignancy with a five-year survival rate of 55% [9]. Therefore, close monitoring is necessary for ensuring and intervening to maximize survival rate and quality of life. Notably, better-regulated work practices among industrial workers, especially steel manufacturers, concerning exposure to substances and improved hygiene practices should be primary preventive measures [5].



Figure 1. Fungating mass on the posterolateral aspect of the left scrotum, the medial part of the left thigh, and the dorsal penile shaft



Figure 2. CT scan showing fungating lesion involving the scrotum, inguinal and abdominal lymphadenopathy



Figure 3. Primary closure of scrotum with remaining scrotal skin flap was done



Ethical Considerations

Compliance with ethical guidelines

There were no ethical considerations to be considered in this research.

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Conflict of interest

The authors declared no conflict of interest.

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