

Rare case of basal cell carcinoma of genital area: Diagnosis and treatment

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ABSTRACT

The most incessant skin malignancy is basal cell carcinoma (BCC), arising from cells of the basal layer of the epithelium or from the external root sheath of the hair follicle. BCC of the genital area is an aberrant subsistence. We are presenting one such rare case of BCC of the genital area which was not amenable to surgery because it was locally advanced disease if it was executed it may have result in highly mutilating surgery. Since the patient refused the main modality, the best available option for her was chemo-radiotherapy for averting the post-surgical anatomical disfigurement of the private parts which may results in the psycho-social ordeal to the patient after loss of docility. The rationale of presenting this case is the rarity of BCC in the genital region and it should always kept in mind as a differential diagnosis by physicians, and biopsy from visible lesions is always recommended. Also, the majority of patients are treated with local treatment but in case of locally advanced or non-amenable lesions; induction chemotherapy followed by radiation/ chemoradiation therapy is an option and can be effective.

Keywords: Basal Cell Carcinoma, Chemo-radiotherapy, Cobalt 60.

Basal cell carcinomas (BCC) are common cutaneous malignancies characteristically on sun-exposed sites, with about 85% of reported cases occurring either on the head or neck [1]. Ultraviolet light exposure is an important etiologic factor in BCCs, and BCCs arising from non-sun-exposed areas are, therefore, very rare. In particular, the axilla, nipple, the genital and perianal areas are not likely to be exposed to ultraviolet light; thus, if BCC develops in these areas, other predisposing factors should be considered. Nevertheless, this carcinoma can arise, albeit rarely, in non-sun-exposed areas, such as the axilla, nipple, and the genital and perianal areas [2,3]. BCCs of the pubic area are exceedingly rare, i.e. about 0.05% of all BCCs [2]. We report the case of a BCC arising in the genital area which was treated with chemoradiotherapy at our institute and doing well for two years.

CASE REPORT

A 67-years-old female presented with chief complaints of a lesion in the genital area for 2 years, it was insidious in onset and gradually progressive to the present size (as shown in Fig. 1). Patient also complained of burning sensation and itching locally from the last 10 days, it was insidious in onset and gradually progressive and relived by taking medications from local hospital. There was no history of any radiation or chemical exposure.

On local examination, there was a reddish flat lesion of size 2x1.5cm present over the posterior half of both labia minora and was non-tender (Fig. 1). No abnormality was found in per speculum, per-vaginum and per-rectal examination. There were

no palpable lymph nodes in the bilateral inguinal or femoral region also no similar kind of lesion were present in other sites of the body. General physical examination was done and no abnormality was found. Systemic examination including the central nervous system, cardiovascular system, respiratory system all were within limits. Karnofsky performance status (KPS) was 90. Vitals including pulse rate was 72 beats per minute, regular, good volume, blood pressure was 110/73 mm Hg taken in the right arm in sitting position.

Routine hematological and biochemistry were within normal limits. The biopsy was taken and a histopathological



Figure 1: A reddish flat lesion of size 2x1.5cm present over the posterior half of both labia minora (before starting the treatment).

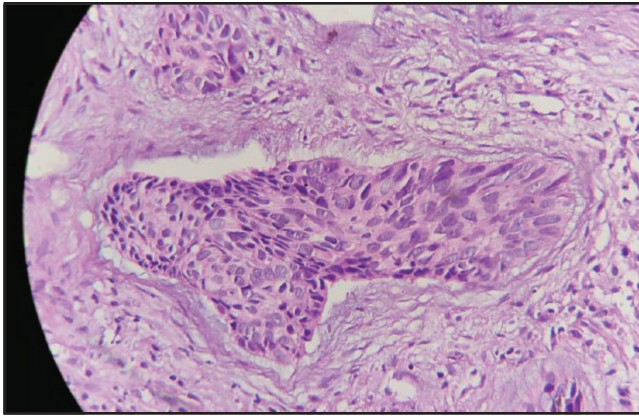


Figure 2: Figure showing High power image shows basaloid epithelial tumour cells arising from epidermis having mildly pleomorphic hyper-chromatic nuclei, scant cytoplasm and atypical mitosis. Tumour showed peripheral palisading, peritumoral clefting surrounded by myxoid stroma, features suggestive of basal cell carcinoma.

examination (HPE) was suggestive of basal cell carcinoma (Fig. 2). Complete metastatic workup was done. Magnetic resonance imaging (MRI) pelvis suggestive of short-T1 inversion recovery sequence (STIR) hyperintense lesion of size 2x1.5 cm seen involving bilateral labia minora (Left<Right) which was showing diffusion restriction on diffusion-weighted imaging (DWI) and post contrast-enhancement on post-contrast image. This lesion lost fat planes with the urethra and vagina. Few lymph nodes were seen in the bilateral inguinal region, largest measuring 1.9x1.5 cm on the right side.

The patient was explained about the first treatment modality i.e. surgery, but the patient refused for surgery and agreed for chemotherapy and radiotherapy. So, she was given paclitaxel and cisplatin-based chemotherapy three cycles followed by chemoradiotherapy @ 50Gy/25#/5weeks with weekly cisplatin followed by a perineal boost of 14Gy/7#/1.5 weeks in frog-leg position. External beam radiation therapy was given by Theratron® 780e Cobalt-60 machines using two parallel and opposed fields till 50Gy (Fig. 3a and 3b) followed by a perineal boost of 14Gy/7#/1.5 weeks in frog-leg position (Fig. 3c).

The patient had a complete response assessed by MRI pelvis after completion of treatment. The patient was kept on regular follow-up without any anatomical distortion and function, which was of paramount importance to the patient (Figure 4). During treatment, the patient had grade-II bowel, bladder toxicity, grade-I rectal toxicity, and grade-II skin and mucosal membrane toxicity, all were scored as per acute Radiation Therapy Oncology Group

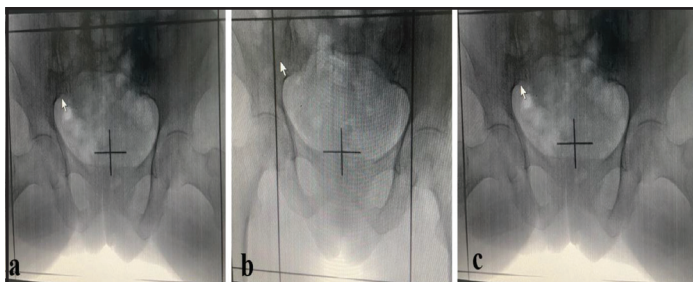


Figure 3: Portal showing (a) anterior field (Phase-I), (b) posterior field (Phase-I) and (c) frog leg position (Phase-II).

(RTOG) morbidity criteria. All acute toxicities were managed conservatively without affecting the treatment. During 2 years of follow-up, no late toxicity was noted.

DISCUSSION

The most important predisposing factor for BCC is chronic exposure to ultraviolet light (UVL), and more than 80% of BCCs are found in sun-exposed areas of the body, such as the face. Consequently, BCCs of the non-sun-exposed areas, such as nipple, axilla or the genital and perianal areas are extremely rare. Le Sueur *et al*[4] investigated 10,000 BCCs and only 15 axillary BCCs (0.05%) were identified. With regard to the BCCs of the nipple, less than 30 cases were reported in the world [5]. Gibson and Ahmed [2] reported 36 genital BCCs (0.2%) and 15 perianal BCCs (0.08%) out of a total of 18,943 investigated BCCs. Ten of the 36 genital BCCs occurred in the pubic area, representing 0.05% of the cases studied.

Given that these regions are usually not exposed to sun-light and well covered, other etiological factors should be considered when a patient presents with a BCC of the non-sun-exposed areas. These factors can be radiation therapy, alterations in immune surveillance, exposure to coal tar or arsenic, sexually transmitted diseases, burns, traumatic scars, and chronic skin irritation due to chronic dermatologic conditions, such as chronic dermatitis [6]. Korean authors [5,6,7] found no other etiologic factors in the cases of BCCs on the non-sun-exposed area reported till date, as was the case in our study.

In our case, the patient was not considered for surgery despite being the 1st preferred treatment of choice, keeping in mind the organ disfigurement which may have resulted after highly mutilating surgery for such anatomical sites. Also, BCC is radiosensitive as well as chemo-sensitive, so we exploit the benefit of both for the patient cure. As the patient declined surgery initially as well as after neoadjuvant chemotherapy and when we explored the literature, the role of chemotherapy was mentioned, although it was less [8,9,10] especially in non-amenable, advanced and metastatic disease. So chemo-radiotherapy was chosen as treatment modality by the patient. The notion of administering neoadjuvant chemotherapy was to decrease the burden of disease as loco-regional lymph nodes were also present at the presentation. The patient was managed with radical treatment without any anatomical disfigurement.

The physicians might initially interpret these cancers as either inflammatory or infectious disease [11,12]. It is recommended that the physicians must consider the skin cancer as one of the differential diagnosis and biopsy of all suspect lesions should be performed, even if the BCC at these regions is dubious.

CONCLUSION

BCCs arising from the non-sun-exposed areas are although rare and may present for longer durations than those arising from other areas of the body. The majority of BCC patients are treated



Figure 4: Post-treatment picture of the patient with no disease.

by local treatments without the need for systemic chemotherapy. However, in non-amenable lesions, neo-adjuvant cisplatin-based chemotherapy following radiotherapy can be effectively used.

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