Verrucous Carcinoma of the Leg – A Rare Variant of Squamous Cell Carcinoma in an Unusual Site: A Case Report

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Abstract

Ulcero-proliferative growth over extremities is common in day to day surgical life. The presenting complaints and time of presentation may vary through an ulcer, ulcero-proliferative growth, and fungating growths. Most commonly diagnosed in such ulcero-proliferative growth is squamous cell carcinoma diagnosed by edge-wedge biopsy and histopathological examination. Among the variants of squamous cell carcinoma, verrucous carcinoma is a rare variant. Verrucous carcinoma is a variant of well-differentiated squamous cell carcinoma. Verrucous carcinoma grows gradually, has a tendency of local invasion and seldom metastasizes. Verrucous carcinoma may occur in various head and neck locations, as well as in the genitalia. The oral cavity is the most common site of this tumor. Here we are presenting such a case of verrucous carcinoma over the leg (unusual site). Surgical resection with sufficient safety margin is recommended.

Key words: Leg malignancy lesions, Squamous cell carcinoma, Ulcero-proliferative growth, Verrucous carcinoma

INTRODUCTION

Verrucous carcinoma is a low-grade, well differentiated uncommon variant of squamous cell carcinoma.1 It is also referred as Ackerman’s tumor since it is first described by Ackerman in 1948.2,3 It is also called as snuff dipper’s carcinoma since this variant is often seen in snuff users and those who chew tobacco.4 The age of presentation ranges from 50 to 80 years with a male predominance and the median age is 67 years. Males are more commonly affected.5 Oral mucosa is the most common site of involvement.6 It may occur in head, neck region and in the genitalia. The majority of cutaneous carcinomas are formed on feet.7 Verrucous carcinoma may grow very large and can destroy adjacent tissue such as bone and cartilage. Surgery is considered as the treatment of choice. The extent of surgical margin and the adjuvant radiotherapy are still controversial. Verrucous carcinoma over the leg is unusual.

CASE REPORT

A 51-year-old male patient presented with chief complaints of growth over shin of the left leg for past 3 years gradually attained the present size and complaining pain for post month. Past history revealed that he is a smoker for past 35 years and alcoholic for past 28 years. He is known diabetic and hypertensive.

On clinical examination, patient is afebrile, pulse rate: 76/min, blood pressure: 140/80 mm of Hg and respiratory rate: 16/min. There is a tender cauliflower-like ulcero-proliferative growth of size longer diameter 4.5 cm × 4 cm × 3.5 cm over shin of left lower limb. It is not bleeding on touch and mobile over underlying structures with no palpable regional lymph nodes.

Laboratory findings indicated anemia (hemoglobin: 9.0 g/dl) total blood cell count: 7,800 cell/cu.mm, clotting time: 3 min 55 s, bleeding time: 1 min 35 s, blood urea: 36 mg/dl,
serum creatinine 0.9 mg/dl and random blood sugar 126 mg/dl. X-ray of left leg with ankle and knee joints is normal.

A conservative surgical wide excitation with split thickness skin grafting done.

Specimen (Ranagaraya Medical College/Kakinada Biopsy, No. 408/15) is sent for histopathology. The diagnosis of verrucous carcinoma is confirmed (Figures 1 and 2).

**DISCUSSION**

Verrucous carcinoma usually occurs over 60 years of age. Males are more prone. Usually, sites of involvement are gingiva, buccal mucosa, alveolar mucosa, hard palate floor of mouth, larynx, esophagus, penis and scrotum. The majority of cutaneous carcinomas (90%) are found on feet. The incidence of verrucous carcinoma on the leg is unknown. Lesions are painful show multiple reggae like folds and deep clefts. It is a slow growing warty, well circumscribed exophytic lesion usually covered by leukoplakic patches. Lesion usually starts as verrucous hyperplasia then becomes vegetant resembling verrucous leukoplakia and finally it takes months to years to develop into Verrucous carcinoma. It is locally malignant, if it is recurrent it is highly malignant than squamous cell carcinoma and that rarely metastasis. Verrucous carcinoma may grow large in size, resulting in destruction of adjacent tissue, such as bone and cartilage. Reactionary regional lymphadenopathy may present due to inflammation.

Based on site of occurrence it is classified into four types:
1) Ano-urogenital: Giant chondylomaaccuminatum, Buschke-Lowenstein tumor.
2) Oro-aerodigestive: Ackerman tumor, oral florid papillomatosis.
3) Feet: Carcinoma cuniculatum, epitheliomacuniculatum.
4) Other cutaneous sites: Cutaneous verrucous carcinoma, papillomatosis cutis carcinoidis.

Major risk factors are smoking, snuffing of tobacco and alcohol consumption. Betel nut chewing is an additional risk factor in Taiwan. Different gene mutation sites in the head and neck cancers between western countries and Taiwan have been reported. Verrucous carcinoma may be associated with HPV infections may be with serotypes 16 and 18, but serotypes 6 and 11 have been reported.

Grispan have divided Verrucous carcinoma into four types:

Type Ia: Acanthosis, papillomatosis, luekoedema, moderate ortho or parakerstosis, hypertrophic interpapillary crests and stratification of basal layer.

Type Ib: Cryptic depression of epithelial surface, invagination of epithelium and fistulous tendency.

Type II: Areas with characteristics of Type-Ia or Type-Ib and areas with hyperchromatic nucleus and atypical mitosis.

Type III: Areas with Type-I or Type-II and features of squamous cell carcinoma. Anaplastic cells and metastasis are frequently observed in this type.

**Staging of Verrucous (squamous cell) carcinoma**

|TX| Primary tumor cannot be assessed |
|T0| No evidence of primary tumor |
|Tis| Carcinoma in situ |
|T1| Tumor ≤2 cm in greatest dimension |
|T2| Tumor >2 cm, but not >5 cm, in greatest dimension |
|T3| Tumor >5 cm in greatest dimension |
|T4| Tumor invades deep extradermal structures (i.e., cartilage, skeletal muscle, or bone) |

**Regional lymph nodes (N)**

|NX| Regional lymph nodes cannot be assessed |
|N0| No regional lymph node metastasis |
|N1| Regional lymph node metastasis |

**Distant metastasis (M)**

|M0| No distant metastasis |
|M1| Distant metastasis |
Stage grouping

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Conservative surgical excision is the treatment of choice for Verrucous carcinoma. Treating of regional lymphadenopathy is not mandatory because the metastatic spread is rare in Verrucous carcinoma. Verrucous carcinoma is considered to be have a poor response to radiotherapy. The combination of chemotherapy and surgery can be considered.

CONCLUSIONS

Verrucous carcinoma is a rare variant of squamous cell carcinoma. Past history of hyperthyroidism (increased appetite, loss of weight, tremors, and menorrhagia) present Commonest location Verrucous carcinoma is the oral cavity, and extraoral sites are genitalia and feet, but on the leg is rare. Wide local excision is treatment of choice. Radiotherapy described but proved ineffective.

REFERENCES


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