

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

D Abhivardhan¹, Veera Bhadram², Siva Kumar², A B Jagadeesh³, P Sushma³

¹Professor, Department of General Surgery, Rangaraya Medical College, Kakinada, Andhra Pradesh, India, ²Assistant Professor, Department of General Surgery, Rangaraya Medical College, Kakinada, Andhra Pradesh, India, ³Post-graduate, Department of General Surgery, Rangaraya Medical College, Kakinada, Andhra Pradesh, India

Abstract

Ultero-proliferative growth over extremities is common in day to day surgical life. The presenting complaints and time of presentation may vary through an ulcer, ultero-proliferative growth, and fungating growths. Most commonly diagnosed in such ultero-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, Ultero-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 past 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 ultero-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,

Access this article online



www.ijss-sn.com

Month of Submission : 04-2015
 Month of Peer Review : 05-2015
 Month of Acceptance : 05-2015
 Month of Publishing : 06-2015

Corresponding Author: Dr. Abhivardhan Dadi, Rangaraya Medical College, Kakinada, Andhra Pradesh, India. Phone: +91-984873655. E-mail: abhivardhandadi@gmail.com

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.⁷ 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.⁸ 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.⁹ Reactionary regional lymphadenopathy may present due to inflammation.¹⁰

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 carcinoids.

Major risk factors are smoking, snuffing of tobacco and alcohol consumption.¹¹ 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.¹²⁻¹⁵ Verrucous carcinoma may be associated with HPV infections may be with serotypes 16 and 18, but serotypes 6 and 11 have been reported.¹⁶

Grispan have divided Verrucous carcinoma into four types.¹⁷

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

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

Type II: Areas with characteristics of Type-I_A or Type-I_B 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.



Figure 1: Pre-operative verrocous carcinoma over leg

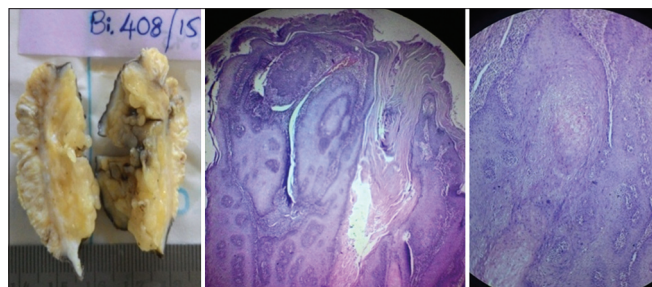


Figure 2: Gross specimen and histopathologic pictures

Staging of Verrucous (squamous cell) carcinoma

TX	Primary tumor cannot be assessed
T0	No evidence of primary tumor
Tis	Carcinoma <i>in situ</i>
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)	
MX	Distant metastasis cannot be assessed
M0	No distant metastasis
M1	Distant metastasis

Stage grouping			
Stage 0	Tis	N0	M0
Stage I	T1	N0	M0
Stage II	T2	N0	M0
	T3	N0	M0
Stage III	T4	N0	M0
	Any T	N1	M0
Stage IV	Any T	Any N	M1

Conservative surgical excision is the treatment of choice for Verrucous carcinoma.¹⁸ Treating of regional lymphadenopathy is not mandatory because the metastatic spread is rare in Verrucous carcinoma.¹⁹ Verrucous carcinoma is considered to be have a poor response to radiotherapy.²⁰ 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

- Ridge JA, Glisson BS, Lango MN, Feigenberg S. Head and neck tumours. In: Pazdur R, Wagman LD, Camphausen KA, Hoskins WJ, editors. Cancer Management: A Multidisciplinary Approach. 11th ed. London: W.B. Saunders; 2008.
- Ackerman LV. Verrucous carcinoma of the oral cavity. *Surgery* 1948;23:670-8.
- Steffen C. The man behind the eponym: Lauren V. Ackerman and verrucous carcinoma of Ackerman. *Am J Dermatopathol* 2004;26:334-41.
- McGuirt WF. Snuff dipper's carcinoma. *Arch Otolaryngol* 1983;109:757-60.
- Tornes K, Bang G, Strømme Koppang H, Pedersen KN. Oral verrucous carcinoma. *Int J Oral Surg* 1985;14:485-92.
- Medina JE, Dichtel W, Luna MA. Verrucous-squamous carcinomas of the oral cavity. A clinicopathologic study of 104 cases. *Arch Otolaryngol* 1984;110:437-40.
- Delahage JF, Janser JC, Rodier JF, Auge B. Cuniculatum carcinoma. 6 cases and review of the literature. *J Chir (Paris)* 1994;131:78-8. [Cross ref] carcinoma arising in the tongue. *Head Neck Pathol* 2012;6:130-4.
- Murrah VA, Batsakis JG. Proliferative verrucous leukoplakia and verrucous hyperplasia. *Ann Otol Rhinol Laryngol* 1994;103:660-3.
- Koch BB, Trask DK, Hoffman HT, Karnell LH, Robinson RA, Zhen W, et al. National survey of head and neck verrucous carcinoma: Patterns of presentation, care, and outcome. *Cancer* 2001;92:110-20.
- Claydon RJ, Jordan JE. Verrucous carcinoma of Ackerman, a distinctive clinicopathologic entity: Report of two cases. *J Oral Surg* 1978;36:564-7.
- McCoy JM, Waldron CA. Verrucous carcinoma of the oral cavity. A review of forty-nine cases. *Oral Surg Oral Med Oral Pathol* 1981;52:623-9.
- Xu J, Gimenez-Conti IB, Cunningham JE, Collet AM, Luna MA, Lanfranchi HE, et al. Alterations of p53, cyclin D1, Rb, and H-ras in human oral carcinomas related to tobacco use. *Cancer* 1998;83:204-12.
- Saranath D, Chang SE, Bhotie LT, Panchal RG, Kerr IB, Mehta AR, et al. High frequency mutation in codons 12 and 61 of H-rasoncogene in chewing tobacco-related human oral carcinoma in India. *Br J Cancer* 1991;63:573-8.
- Yeudall WA, Torrance LK, Elsegood KA, Speight P, Scully C, Prime SS. Ras gene point mutation is a rare event in premalignant tissues and malignant cells and tissues from oral mucosal lesions. *Eur J Cancer B Oral Oncol* 1993;29B:63-7.
- Kuo MY, Jeng JH, Chiang CP, Hahn LJ. Mutations of Ki-ras oncogene codon 12 in betel quid chewing-related human oral squamous cell carcinoma in Taiwan. *J Oral Pathol Med* 1994;23:70-4.
- Lübbe J, Kormann A, Adams V, Hassam S, Grätz KW, Panizzon RG, et al. HPV-11- and HPV-16-associated oral verrucous carcinoma. *Dermatology* 1996;192:217-21.
- Grinspan D, Abulafia J. Oral florid papillomatosis (verrucous carcinoma). *Int J Dermatol* 1979;18:608-22.
- Chhoeurn V, de Villa GH, Lo LJ. Osseous regeneration after embolization of mandibular arteriovenous malformation. *Chang Gung Med J* 2003;26:937-42.
- Rink B. Verrucous carcinoma of the oral mucosa. *Laryngorhinootologie* 1991;70:542-5.
- Jyothirmayi R, Sankaranarayanan R, Varghese C, Jacob R, Nair MK. Radiotherapy in the treatment of verrucous carcinoma of the oral cavity. *Oral Oncol* 1997;33:124-8.

How to cite this article: Abhivardhan D, Veerabhadram, Kumar S, Jagadeesh AB, Sushma P. Verrucous Carcinoma of the Leg – A Rare Variant of Squamous Cell Carcinoma in an Unusual Site: A Case Report. *Int J Sci Stud* 2015;3(3):128-130.

Source of Support: Nil, **Conflict of Interest:** None declared.