

## A Case of an Extensive Nasal Mass Originating from Malignant Transformation of Viral Wart (Verruca Vulgaris)

Viral Siğilin (Verruca Vulgaris) Malign Dönüşümünden Kaynaklanan Yaygın Bir Nazal Kitle Olgusu

Yi Wee Lim<sup>1,2</sup>, Baharudin Abdullah<sup>2</sup>, Ida Sadjah Sachlin<sup>1</sup>

<sup>1</sup>Department of ORL, Hospital Sultanah Bahiyah, Alor Setar,05460, Kedah, Malaysia

<sup>2</sup>Department of ORL, Hospital University Sains Malaysia, Kubang Kerian,16150, Kelantan, Malaysia

### ABSTRACT

Viral wart in the head and neck region can be commonly encountered in a clinician's day to day practice and are typically benign in nature. We are reporting a case of malignant transformation of a benign Viral Wart (Verruca Vulgaris) into a huge malignant nasal mass. We would like to highlight that malignant transformation of a benign nasal wart can occur even after years of dormant period.

**Key Words:** Nasal mass, Viral wart, malignant transformation, Verrucous Carcinoma

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### ÖZET

Baş ve boyun bölgesindeki viral siğil, bir klinisyenin günlük muayenehanesinde sıklıkla karşılaşılabılır ve tipik olarak iyi huyludur. İyi huylu Viral Siğilin (Verruca Vulgaris) büyük bir kötü huylu nazal kitleye kötü huylu dönüşümü olgusunu bildiriyoruz. İyi huylu bir burun siğilinin kötü huylu dönüşümünün yıllarca uykuda kaldıktan sonra bile meydana gelebileceğini vurgulamak isteriz.

**Anahtar Sözcükler:** Burun kitlesi, Viral siğil, malign transformasyon, Verrüköz Karsinom

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**ORCID IDs:** Y.W.L.0000-0001-5123-119X, I.S.S. 0000-0003-2825-3248, B.A. 0000-0001-9138-9215

**Address for Correspondence / Yazışma Adresi:** Baharudin Abdullah, Department of ORL, Hospital University Sains Malaysia, Kubang Kerian, 16150, Kelantan, Malaysia E-mail: baharudin@usm.my

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## INTRODUCTION

Verrucous Carcinoma was defined by L.V Ackerman as a well – differentiated, slow growing neoplasm with minimal tendency of metastasis (1). Depending on its localization, verrucous carcinoma when present at genital area it is called Bushke-Loewenstein's tumour, at the plantar region called epithelioma cuniculatum of the foot, and at the upper aerodigestive track named Ackerman tumor.

VC differs from the classical Squamous Cell Carcinoma (SCC) in that it has a low degree of dysplasia. This tumour that has predominantly horizontal growth, it tends to erode more than infiltrate (2) thus giving rise to better prognosis, which rarely causes regional metastases (2)

## CASE REPORT

We are reporting a rare case of malignant transformation of Verruca Vulgaris into Verrucous Carcinoma. A 63 years old man with underlying Parkinson's Disease and Hypertension presented with a small pedunculated mass over the vestibule of both nostril, the left side measuring about 0.3cm x 0.4cm.

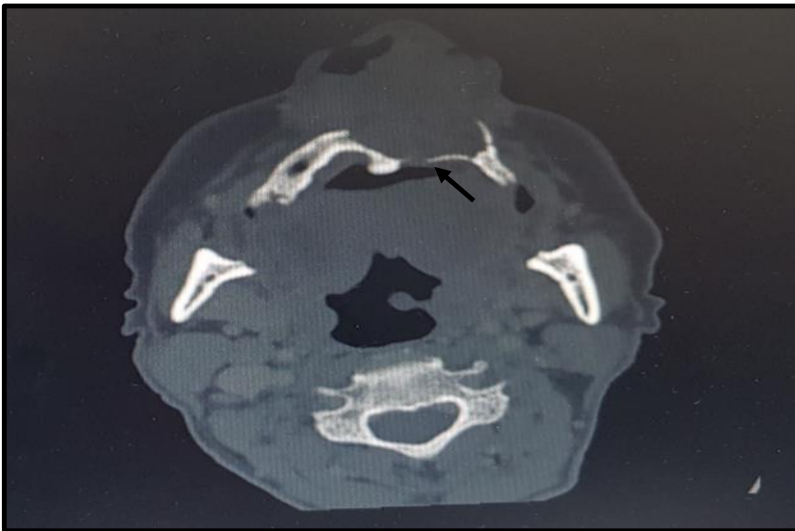
A biopsy was taken and histopathological result reported as fragments of superficial keratinizing stratified squamous epithelium with no evidence of dysplasia or malignancy consistent with Verruca Vulgaris. Patient however defaulted subsequent follow-up. He had visited multiple general practitioners after default and received treatment as a common wart.

Patient was referred back to our ENT clinic again three years later this time for increasing swelling in his nasal vestibule for one month and he felt it was rapidly increasing in size with intermittent bleeding. He claimed the mass had rapidly increase in size and now has occupied both the nasal cavity. On examination (Figure 1), the warty looking lesion was occupying the whole of nasal vestibule bilaterally. A rigid endoscopy was done, the mass was confined to the anterior nasal cavity. A tissue biopsy was obtained initially showing cellular atypia.

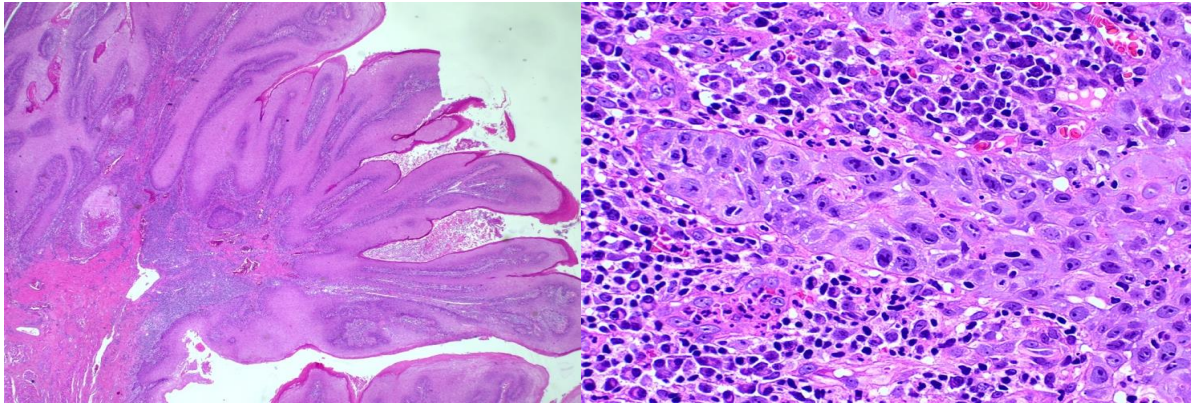
A Computed Tomography (CT) Paranasal Sinus (Figure 2) showed an irregular enhancing mass with epicentre within the superior alveolar process with associated local infiltration and adjacent bony erosion and destruction into both side of the nasal cavity as well as involving the anterior and medial wall of bilateral maxillary sinus but sparing the floor of orbit. In view of high suspicion of malignancy from CT scan, we repeated a second biopsy and this time was reported as polypoid tissue with papillomatous surface, composed of proliferating atypical squamous cells in thick papillae with prominent bulbous downgrowth pattern suggestive of a well differentiated squamous cell carcinoma



**Figure 1:** Left picture showing mass occupying whole of bilateral nasal vestibular region. Right pictures showing invasion of the mass from the floor of nose into the hard palate.



**Figure 2:** CT Paranasal sinus, axial view bone window, where arrow shows evidence of erosion along the floor of nose.



**Figure 3:** Left picture showing macroscopic appearance of Villiform papillomatous structure composed of large well-differentiated squamous epithelial cells with a deceptively benign appearance. Right picture showing high power magnification showing dysplastic cells with moderate nuclear pleomorphism with prominent nucleoli and abundant eosinophilic cytoplasm

Patient undergone Bilateral Partial Maxillectomy via sub labial approach. Intraoperatively, the tumour occupied both anterior nasal cavity, extending posteriorly to the junction of hard palate, inferiorly to the alveolar part of the alveolar ridge and philtrum. The tumour was mostly adherent to the medial, inferior and anterior maxillary sinus wall hence maxillectomy was done removing the inferior, medial and the anterior wall of the bilateral maxillary sinus. The defect was covered via a temporal surgical obturator by Oromaxillofacial team. Post operatively patient was able to resume oral intake on day three. A final palatal obturator was applied to about 2 months post-surgery. Patient was followed-up monthly and has been tumour free for the past two years post-surgery.

Histopathology result reported as papillomatous tumour is squamous cell carcinoma which composed of malignant squamous cells displaying moderate nuclear pleomorphism with prominent nucleoli. Keratin pearl formation, intracytoplasmic keratinization as well as intercellular bridges are obvious. Mitosis was seen, no lymphovascular invasion. There was adjacent nasal mucosa dysplasia, and the tumour involves minimally into underlying stroma (Figure 3). P16 stain show patchy weak nuclear and cytoplasmic staining only 20-40%.

## DISCUSSION

The nasal vestibule is unique in that it is lined not only with keratinizing squamous epithelium but also has different tissue lining from such as hair follicles, sebaceous glands, and sweat glands. Therefore, lesions arising from the nasal vestibule can bear various histologic difference.

Verruca Vulgaris is a benign squamoproliferative lesion caused by Human Papilloma Virus Type 2, 6, 11, 16,18, and 34 can occur on any epidermal surface of the body. Verruca vulgaris, was previously considered to be incapable of malignant transformation(3). However, few risk factors are thought to promote this transformation, namely chronic lymphoedema, immunocompromise state and HPV strain(4).

There are very few case report regarding malignant transformation of Verruca Vulgaris. Noel et al reported one case of renal transplant recipient who developed widespread multiple verrucous skin lesions and transformation of some of them towards infiltrating squamous cell carcinoma after being kept immunosuppressed post transplantation. Shelley et al reported transformation of periungual and subungual warts in a patient with chronic lymphoedema and preceding immunocompromised state into squamous cell carcinoma(4). In our patient, there was no chronic lymphoedema nor immunocompromise state. However, there is a possible role of HPV virus linked to the positive staining of P-16.

The classical histopathologic findings which support the diagnosis of Verrucous Carcinoma are verrucous surface with peripheral buttressing and shouldering and "elephant feet-" like downgrowth seeming to compress the underlying connective tissue and typically showing minimal or absent cytological atypia (5) However, in superficial biopsies without an obvious invasive growth the benign appearing cytology could be erroneously diagnose as that of a benign squamous proliferation. Because it is cytologically benign, besides the focal basal cell

nuclear hyperchromatism, distinction from VC and verrucous hyperplasia (VH) cannot be based only on cytologic features.

Two points should be taken into consideration in view of the cytologically challenging diagnosis of VC . First the clinician should always ensure adequate depth of biopsy in order to obtain adequate dermal depth of biopsy. Secondly, it is important for clinician to alert the pathologist on the high index of suspicion of malignancy of such cases. As in our report, due to the rapidly increasing nature of the mass coupled with local invasiveness as demonstrated by imaging, we were having a high index of suspicion of a malignancy despite the first biopsy only showing atypia.

When verrucous tumors are discovered early, they can be treated effectively with wide local excision. In our case a more extensive procedure is required since there is already extensive extension of the cancer through the floor of the nose to the palate. Surgical resection remains the choice treatment for this neoplasm. Given that nodal metastasis for VC is rare or often absent. Current literature does not support the role of radiotherapy in the treatment of VC as the risk of radiation-induced anaplastic transformation, manifesting 2 to 8 months following the therapeutic cycle has been demonstrated (6). Overall survival at 2, 5, and 10 years was 73%, 59%, and 36%, respectively for Sinonasal Verrucous Carcinoma after receiving appropriate treatment(7).

## CONCLUSION

Clinician should remain vigilant of the possibility of malignant transformation of viral wart especially when encountering with a wart that does not respond to usual treatment. When suspicion arise, early referral to nearest Otorhinolaryngology specialist will benefit the patient from an early diagnosis and obtaining good overall survival by surgical excision.

## Conflict of interest

No conflict of interest was declared by the authors.

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