Case Report

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Verrucous Carcinoma Larynx: A Deceptive Entity

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Abstract

Verrucous carcinoma is an Unusual Indolent and Deceptive variant of well differenciated squamous cell carcinoma [1] that can be confused with a benign process. Verrucous carcinoma is most commonly seen in elderly male [2] smokers. In all likelyhood no other neoplasm of larynx calls for co-operation between a surgeon and pathologist as much as in the diagnosis of verrucous carcinoma as it is particularly deceptive. The lesion is very difficult to diagnose clinically and histopathologically from a well differenciated squamous cell carcinoma. Although curable at an early stage, leaving it untreated leads to local aggressiveness and calls for a green eyed early detection followed by early surgical intervention to give good results. Keeping in mind that each case is a generative source of ideas for medical and surgical inventions we worked up our case. Our case was diagnosed and treated early thus evading a need for tracheostomy and its consequences. A 53y old male who was a known smoker (40 pack years) who presented with hoarseness of voice of one month duration. Videolaryngoscopy revealed a proliferative growth involving the anterior commissure and anterior 2/3rd of the left vocal cord. Histopathology showed features suggestive of verrucous carcinoma larynx. Microlaryngeal surgery was done and the mass was excised in toto. Post-op period was uneventful with no recurrence till date.

Keywords: Verrucous Carcinoma; Ackermans Tumour; Laryngel Squamous Cell Carcinoma; Uncommon Variant of Squamous Cell Carcinoma.

Introduction

Why is verrucous carcinoma considered uncommon and is said to be an indolent variant of epithelial cancer ?

- Back in 1948, Ackerman as a pathologist delineated Verrucous Carcinoma as a clinico – pathological entity [3].
- This uncommon variant of laryngeal squamous cell carcinoma calls for absolute co-operation between the pathologist and the surgeon as it has always been a dilemma to the pathologist and the surgeon alike.
- The Pathologist sees a very high differentiation of tumour thus making the diagnosis of malignancy difficult. He always underestimates the malignant potential of the lesion, thus labelling it as benign hyperplasia.
- The Surgeon is confused because of the controversy about the treatment and he tends to over estimate the malignant potential of the tumour because he sees a very obviously invasive and fungating tumour

Being described as a highly differentiated, verrucoid squamous cell carcinoma of mucosa or skin, verrucous carcinoma is a malignant neoplasm that arises most often from the oral mucosa followed by larynx (0.7-1.0%) [3] making glottis the most common non oral head and neck site for verrucous carcinoma. Similar lesions have also been reported involving the genitals, nasal passage and oesophagus. The incidence of verrucous carcinoma is among the least common of oral cancers ranging from 4.5 -9 %. Thus far, India seems to have reported the largest experience where oral cancer constitutes

about 27% of all cancers [4].

Verrucous carcinoma is seen predominantly in men in their 6th or 7th decade with a history of consumption of alcohol, chewing or smoking tobacco.

Several authors opine that HPV possibly play a vital role in the genesis of verrucous carcinoma as HPV DNA has been identified in approximately 85% of patients with laryngeal verrucous carcinoma [5], sadly, to a lesser extent they have also been isolated from normal cells as well. Thus the role of HPV in the patho physiology of verrucous carcinoma is still under debate.

In laryngeal Verrucous carcinoma hoarseness of voice is always the most common presenting symptom while dyspnoea and dysphagia are restricted to large tumours.

Case

A 55 y old male patient presented with Hoarseness of voice of 1 month duration . He was a known Smoker of 40 pack years . He had no previous history suggestive of dysphagia, dyspnoea. Patient was clinically examined and video laryngoscopy showed an exophytic bulky growth occupying the anterior commissure and anterior 1/3rd of left vocal cord. The mass was sessile and did not move with respiration . Left vocal cord showed restricted mobility. The findings were confirmed with a CT-THORAX . CT report was suggestive of laryngeal tumour without any paraglottic involvement.

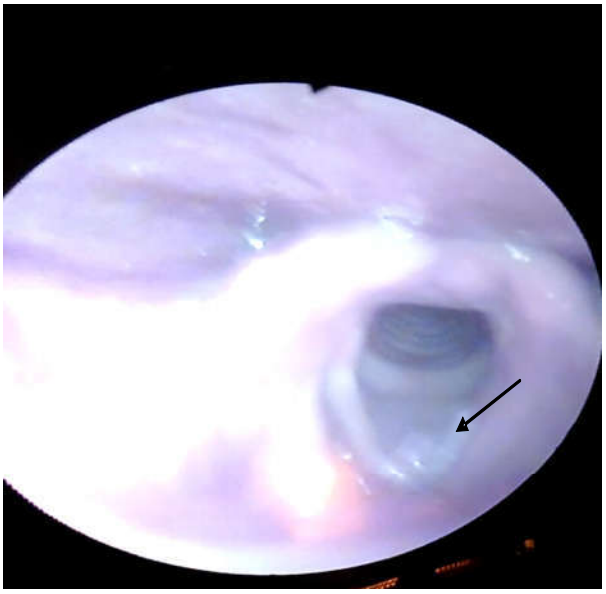


Fig. 1: Video directed laryngoscopy showing growth involving left vocal cord and anterior comissure

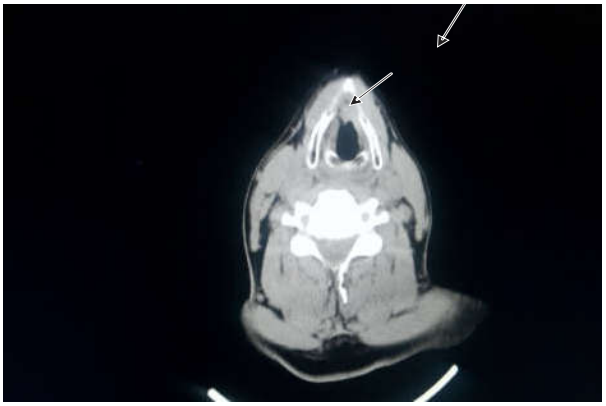
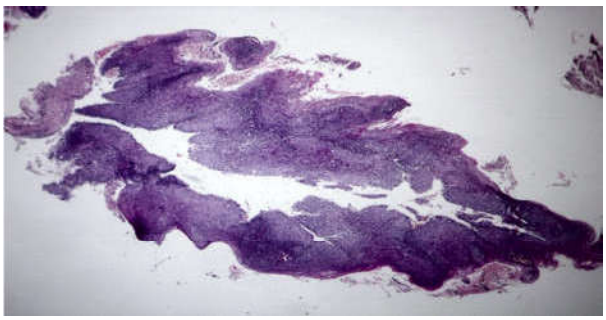


Fig. 2: Ct-thorax - arrow head pointed towards the verrucoid growth

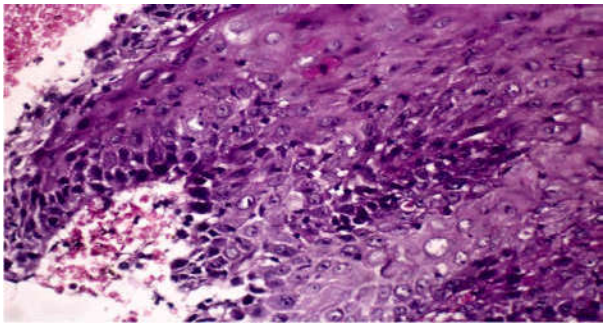
Keeping in mind the concept of field cancerisation[6] and multicentric or multi focal nature of squamous cell carcinoma Patient was subjected to haematological, biochemical and radiological and triple endoscopic investigations which proved negative for distant metastasis and second primaries.

Treatment

Based on the available investigative data surgical mode of treatment was opted. Micro laryngeal surgery was done and the mass was removed in toto and sent for histo pathological examination. There was no paraglottic or subglottic extension. Post operative period was uneventful and the patient was discharged on the 10th post operative day.



Sectioned study of the lesion showing stratified squamous epithelium with a broad base, widened rete ridges and no breech in the basement membrane



A 40 x view of the same specimen with few koilocytes and occasional mitotic figures. The abundant eosinophilic cytoplasm represents keratinisation.

The histopathological examination showed stratified squamous epithelium with no breech in the basement membrane, few koilocytes and occasional mitotic figures, abundant keratinized layer covering the fungating fronds and well circumscribed margins composed of rete ridges suggestive of verrucous carcinoma. The patient is being regularly followed up with no signs of recurrence or distant metastasis. Patient is fine till date and has a reasonably good functional voice.

Discussion

Verrucous carcinoma is also known as verrucous squamous cell carcinoma or Ackermans tumour. Literature has also used other names like Buschke – Loewenstein tumour, epithelio macuniculatum, florid oral papillomatosis and carcinoma cuniculatum [7]. Keeping in mind that the etiology and symptomatology is the same as laryngeal squamous cell carcinoma, an adequate biopsy material is required to obtain a firm diagnosis.

However, to this day, even with a good tissue sample that includes the interface of the tumour with the host, the diagnosis of carcinoma may still prove elusive because the epithelial component of these tumours is still well differentiated and the basement membrane remains intact.

Gross appearance of a typical lesion is a pale, warty, fungating, locally aggressive tumour with a broad base, well circumscribed and clearly demarcated from adjacent tissue [8].

Microscopically verrucous carcinoma is broad based, thrown into papillary fronds, heavily keratinised with a hyperplastic epithelium that pushes rather than infiltrate and has a prominent inflammatory reaction in the adjacent tissue where as a well differentiated squamous cell carcinoma has aggregates of atypical or dysplastic squamous epithelium which exhibits premature keratinisation and high mitotic activity and acantholysis. Infiltration of irregular cords of dysplastic squamous epithelium into adjacent stroma is well appreciated.

Mortality in verrucous carcinoma is mainly due to local invasion and bone destruction as they have the property to erode the adjacent structures rather than invade. Regional lymph node metastasis is uncommon but they might be enlarged and tender when infected and they do not have a predilection for distant metastasis[9]

Head and neck surgeons show a clear reference for surgery with a local control rate of 77-100%. Reports on the role of radiotherapy in the management of verrucous carcinoma are controversial since they are not only said to be radio resistant but they also have anaplastic transformation post exposure in 30% [10]. How ever in spite of local recurrence. Ackerman has opined that radiation offers a reasonable chance for control when the lesions are small and relatively superficial.

Epilogue

Prognosis of verrucous carcinoma is excellent when diagnosed early and treated addequatelu and appropriately. Leaving it untreated leads to local aggressiveness thus calling for a green eyed early detection. Fortunately we diagnosed our case early enough thus avoiding the need for tracheostomy or laryngectomy and was cured completely by microlaryngeal surgery.

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