

Basaloid Squamous Cell Carcinoma of the Larynx, A Rare Variant : A Case Report

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Abstract

Majority of the upper respiratory system malignancy are Squamous Cell Carcinomas, which show several subtypes such as verrucous, spindle cell and basaloid carcinoma. Basaloid Squamous Cell Carcinoma is a rare, aggressive variant, consisting of proliferation of basaloid cells and intimately associated with squamous cell carcinoma, dysplasia or focal squamous differentiation. In this article, we present a case of BSCC of the larynx in a 60 year male who presented with dysphagia.

Key words : Basaloid squamous cell carcinoma, squamous cell carcinoma, larynx

Introduction

Basaloid Squamous Cell Carcinoma (BSCC) is a recently recognized variant of Squamous Cell Carcinoma (SCC) with a predilection to occur in the tongue base, hypopharynx and supraglottic larynx [1]. It is less common but considerably more aggressive than the conventional SCC of the head and neck. Aside from widespread local invasion at the time of presentation, patients have local metastases when the lesion becomes apparent. Less than 50 cases of BSCC involving the larynx have been reported in the literature so far worldwide [2].

Case History

A 60 years male presented to the hospital with difficulty in swallowing food since 15 days, more for solids than liquids. There was no complaints of odynophagia or dysphonia. He was a chronic tobacco chewer since 30 years, non-alcoholic and non-smoker. No history of diabetes and hypertension. On examination of the oral cavity, all the teeth were nicotine stained. There were no palpable lymphnodes. Systemic examination detected no abnormality. His hematological, biochemical, and urine investigations were within normal limits. HIV was non-reactive. Indirect laryngoscopy was done, which showed a growth in the right Aryepiglottic fold on the lateral side extending to the medial side of the pyriform fossa. Vocal cords movements were normal. Direct laryngoscopy confirmed the findings and biopsy of the growth was taken. The tissue was processed and paraffin embedded sections were studied. Sections revealed stratified squamous epithelium and subepithelial tissue. Lobules of basaloid cells arising from the surface epithelium were seen infiltrating

into the subepithelial tissue. These cells had moderate amount of cytoplasm and hyperchromatic nuclei. Within the lobules, there were areas of squamous differentiation with intercellular bridging and individual cell keratinization. The periphery of the lobules showed slightly elongated palisaded cells (Fig-1 and 2). A diagnosis of Basaloid Squamous Cell Carcinoma was made. The patient was advised surgery, which he refused. Hence he was referred for radiotherapy to a higher center.

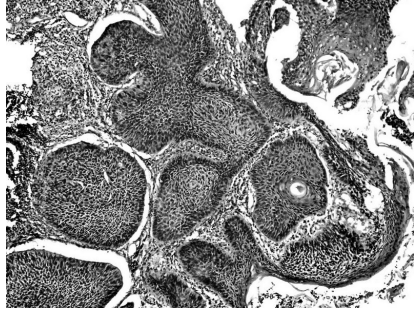


Figure-1: Microphotograph showing lobules of basaloid cells with peripheral palisading of cells (H & E Stain; X200).

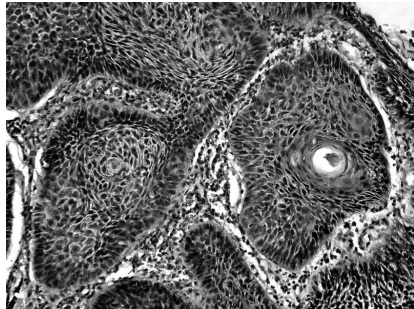


Figure-2: Microphotograph showing squamous differentiation within the nests of basaloid cells (H & E Stain; X400).

Discussion

BSCC is a histologically distinctive, rare, highly aggressive variant of SCC. The entity was first described by Wain et al [3] in 1986 when they reported 10 cases of BSCC that occurred in tongue, hypopharynx and larynx. It arises in a variety of anatomic sites, most frequently in the upper aerodigestive tract with strong predilection for the base of the tongue, supraglottic larynx and hypopharynx, but is also found in the anus, thymus and uterine cervix. BSCC makes up less than 1% of laryngeal carcinoma. The tumor mainly affects men in the sixth and seventh decades of life and usually presents as high stage disease. Tobacco and alcohol abuse appear to be strong risk factors for the development of BSCC. Newer studies have implicated involvement of Human Papilloma Virus (HPV) in the genesis of some of these lesions. HPV positive BSCCs may be less aggressive than HPV negative BSCCs [4]. Kleist B et al [5] have analysed 67 conventional SCC and 10 BSCC for presence of HPV and Herpes simplex virus (HSV). The overall HPV detection rate was 32.5% and they demonstrated an association between basaloid appearance and HSV. Paulino et al[6] have reported detection of Epstein Barr virus (EBV) in 3 cases of nasopharyngeal BSCC, but whether EBV and HPV are causal or contributory factor in BSCC is unclear. Histology shows presence of squamous component with

foci of squamous cell carcinoma, dysplasia or carcinoma-in-situ of the overlying mucosa or focal squamous differentiation within the basaloid component as was in the present case. These tumors are immunopositive for cytokeratin in the area of squamous differentiation, Carcinoembryonic antigen (CEA) in 50% of cases, Epithelial Membrane antigen (EMA) in two-thirds of cases. S-100 positivity is seen in less than 30% of cases. BSCC lacks immunoreactivity for chromogranin, synaptophysin, muscle-specific actin and glial fibrillary acid protein, which helps to distinguish it from neuroendocrine carcinoma [7]. Morice et al [1] have used immunostaining with cytokeratin Ab34 beta E12 to differentiate BSCC from small cell undifferentiated carcinoma. Rodriguez T et al [8] performed immunostaining using p 53 (DO-7), ki-67 (MIB-1) and E-cadherin (36B5) on 11 cases of BSCC and found overexpression of ki-67 and p 53 and low expression of E-cadherin, which could be related to the aggressiveness of the disease and its poor prognosis. Akyol et al [9] found similar sharing features with regular SCC in terms of its proliferation rate and p53 mutation positivity, as well as biologic behavior and clinical outcome. BSCC is an aggressive malignancy, requiring radical surgical excision with neck dissection and adjuvant radiotherapy. Chemotherapy may be entertained for distant metastases. The 2-year mortality rate is around 30-40%. The estimated 5-year survival is around 17.5% by the Kaplan-Meier method [10].

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