

## Case Report

**Basaloid Laryngeal Carcinoma on a Patient with Pneumonectomy Due to Advanced Tuberculosis**

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**ABSTRACT:** The basaloid carcinoma is a rare and distinct type of squamous carcinoma. Of all the squamous carcinomas, the basaloid tumor is noted for its high aggressivity and fast replication rate. It is usually discovered within the upper levels of the larynx (supraglottis), the tongue base or the piriform sinuses in male patients ranging from sixty to eighty years old. The aggressivity of the tumor also means its discovery is usually a late event thus associating a relatively low survival rate within the first 5 years. The current paper presents the case of a patient diagnosed with a malign tumor of the larynx which is then identified as being a squamous basaloid carcinoma. The medical review of the patient reveals a long history of smoking and also pulmonary tuberculosis, for which the patient underwent left pneumonectomy.

**KEYWORDS:** larynx, squamous carcinoma, basaloid carcinoma, pneumonectomy

## Introduction

The laryngeal cancer may be easily considered the prototype malignant tumor when it comes to cancers of the head and neck. With an early diagnosis and treatment, this type of cancer may well yet stand excellent chances of healing with good survival rates within the first 5 years. Unfortunately most patients are diagnosed in late stages of the disease, thus making the treatment more challenging and also decreasing the medical prognosis.

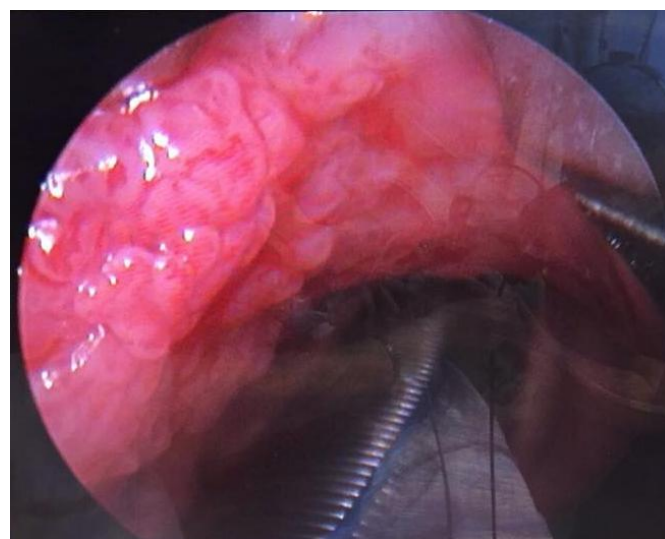
Given the fact that over 90% of head and neck are squamous carcinomas and over 97% of the laryngeal cancers are also squamous lesions [1,2,3], we would present the case of a male patient whom besides the squamous laryngeal carcinoma he was diagnosed with, also has an interesting medical record of pneumonectomy and pulmonary tuberculosis. Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

## Case Report

We present the case of a male patient, C.D., sixty years of age, of urban provenience, retired from the working field, admitted in the E.N.T. Clinic in February 2015 with the following symptoms: pains and difficulty in swallowing, occasional ascending pains in the left ear and dry coughing. The symptoms have been present

for about 7 to 8 months, growing in intensity during the last months, reasons that determined the patient to seek medical help.

The medical records of the patient are significant listing left pneumonectomy performed in 2006 for pulmonary tuberculosis, chronic obstructive bronchitis, mixed severe respiratory deficiency, and HBP (currently under medical control).



**Fig. 1. Direct microlaryngoscopy view of the tumor**

The examination of the patient reveals: absent laryngeal crepitus, no swelling or palpable neck adenopathy;

indirect laryngoscopy: on the laryngeal opening of the epiglottis we find an infiltrative tumoral lesion, which invades the left side of the epiglottis, the ventricular folds, the left aryepiglottic fold and left arytenoid;

nasolaryngeal endoscopy: infiltrative tumoral aspect on the laryngeal opening of the epiglottis we find an infiltrative tumoral lesion, which invades the left side of the epiglottis, the ventricular folds, the left aryepiglottic fold and left arytenoid, the tumor does not bleed spontaneously or upon touching with the fibroscope;

direct microlaryngoscopy: the procedure was done under general anesthesia, the tumor was directly visualized and its extension was evaluated (Fig. 1).

biopsy was performed;

the C.T. scan performed revealed a tumor within the laryngeal aditus, with significant assymetry of the local areas (lateral bulging of the epiglottis, of diffuse and irregular aspect, 1.6 – 0.6 cm in size) (Fig. 2);

chest x-ray as well as C.T. Scan show the absense of the left lung (Fig. 3,4);

The anatomopathological exam identified the structure as being a poorly-differentiated (G3) squamous carcinoma with basaloid areas.

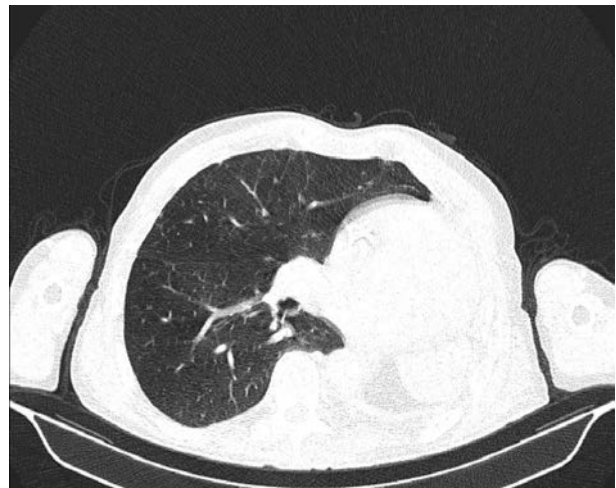
Analysing the results from the clinical and paraclinical findings we are able to establish the diagnosis of malignant supraglottic tumor and left pneumonectomy.



**Fig.2. C.T. Scan of the neck**



**Fig.3. Chest X-ray**



**Fig.4. C.T. Scan of the thorax**



**Fig.5. Larynx – removed via surgery**

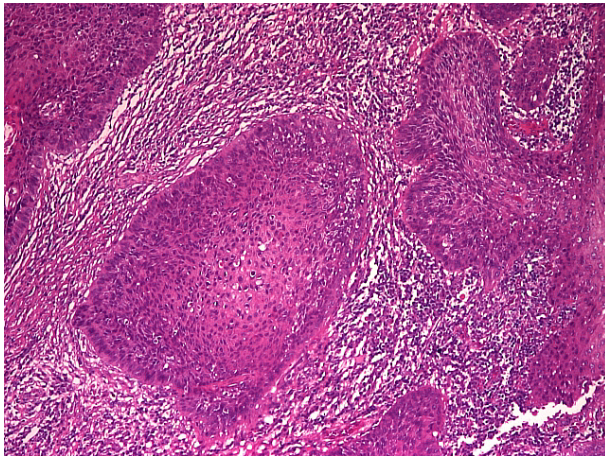
We are also able to establish the need of surgical intervention – supracricoid laryngectomy with bilateral limfadenectomy and neck dissection and also the passage of a



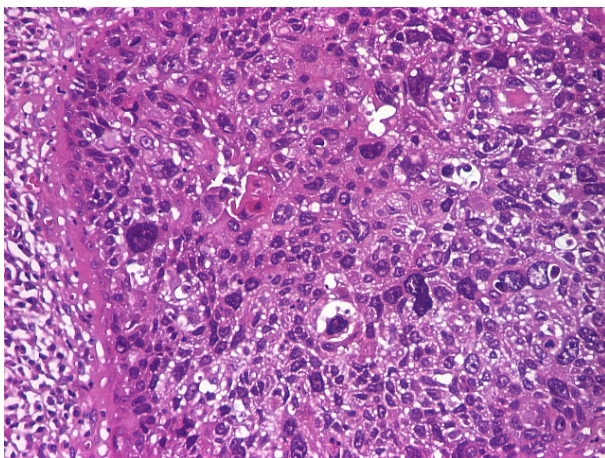
nasogastric feeding tube (Fig. 5). The intervention was performed under general anesthesia with oro-tracheal intubation. Despite the ventilation of one single lung, the procedure went well.

The postoperative evolution of the patient was favorable under antibiotics with a broad spectrum of action, antisecretory medication and analgesics. The patient was closely monitored for complications and received appropriate follow-up.

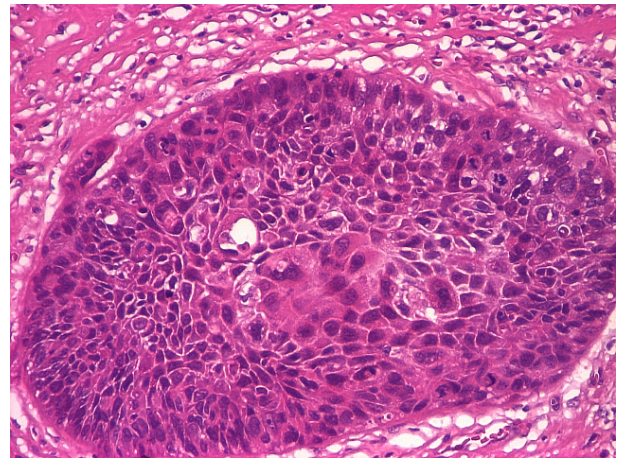
The postoperative morphology exam identified a moderate and poorly differentiated (G2-G3) squamous cell carcinoma, with basaloid aspects. The lesion also had areas with ulcerations, submucosal invasion and abundant inflammatory cells (Fig. 6,7,8). Of thirteen lymph nodes that were examined none shown signs of malignant invasion (T<sub>2b</sub>N<sub>0</sub>Mx)



**Fig.6. Poorly-differentiated carcinoma (G3) – HE 40x**



**Fig.7. Poorly-differentiated carcinoma (G3) – tumor mass of cells with high irregularity in shape and size HE, 100x**



**Fig.8. Isle of tumor mass with palisade aspect in its outer cells HE, 100x**

After being dismissed from our clinic the patient went through a full-oncological treatment in accordance to current oncological therapy guidelines.

## Discussions

Laryngeal carcinomas represent 1% of all the new diagnosed cancers and also sum up 0.74% of deaths caused by cancer.

The survival rate varies between 60 and 70% in Europe and Northern America and significant lower percentages in lower-developed countries. The survival rate is highly dependent on the staging of the tumor and on the etiological factors involved. High alcohol and tobacco consumption are highly correlated to the onset of malign laryngeal tumors. High alcohol consumption also appears to be linked to malignant tumors developing from the upper regions of the larynx, tumors with an even lower survival rate [4].

However, the laryngeal cancer is considered to be one of the most treatable types of cancers, especially given the fact that prevention may also play an important part. The incidence rate in the U.S.A. is estimated around 5.6 new cases in 100.000 individual [5].

A particular interesting aspect, highlighted by recent publications, point out to the association between the persistent HPV infection and the onset of squamous carcinomas of the head and neck. The HPV virus was identified in 95% of the patients, but not all the patients express the E6 and E7 oncogenes, thus leading certain researchers to believe that the virus may act as a cancer inducing factor in just a particular subset of patients.

The squamous cell carcinoma is the most common type of laryngeal malignant lesion. It may account for up to 99% of the laryngeal carcinomas [1,6,7]. Morphologically, the lesion's origin is to be found within the squamous epithelia or the degenerate (metaplasia) respiratory epithelia [8,9,10].

The squamous carcinoma is the sixth most frequent type of tumor in both sexes and the third most frequent type of cancer in developed countries. The incidence rate varies greatly world-wide. In India for example, it is the most frequent type of malignant lesion present in men with a rate of 27 cases in 100.000 individuals (summing up more than 50% of the total cancer cases. In the female population of India we also have the highest rate of this type of lesion, with 10 cases in 100.000 individuals.

The basaloid carcinoma, originally described by Wain and co in 1986 is a rare and highly distinct version of the squamous carcinoma. Despite its predilection for the upper respiratory tract it compounds only 1% of the laryngeal carcinomas [11,12,13].

Of all the squamous carcinomas, the basaloid carcinoma has a high degree of aggressivity. It is mainly diagnosed within the upper larynx, the base of the tongue and the piriform sinuses. It mainly affects men of older ages (sixty to eighty years of age) [14,15,16]. The tumor is usually dense, exofitic, with irregular edges, round or polycyclic in shape. The basaloid carcinoma is an aggressive tumor with rapid growth, usually diagnosed in later stages and with an unfavourable prognosis. Two thirds of these tumors metastasize in nearby lymph nodes and approximately 30 to 50% of them metastasize within the lungs, bones, brain or skin [17,18,19,20].

The present paper wishes to expose one of these rare cases of basaloid carcinomas, one in which the starting point of the tumor was most likely the laryngeal opening of the epiglottis.

## Conclusions

Squamous carcinomas represent around 95% of the carcinomas of the larynx. The basaloid carcinoma, like in our case, is a rare and highly distinct version of the squamous carcinoma. The factors with a powerful impact on the development and onset of laryngeal tumors are: high alcohol and tobacco consumption, viral infections, chemical carcinogens and some genetical factors. Rich medical history like diabetes, pulmonary tuberculosis, HBP or associated respiratory deficiencies turn

diagnosing and treating such pathology into a difficult challenge. Early diagnosis, a radical surgical intervention, prompt and sustained follow-up and oncological treatment (consisting of radiotherapy and appropriate cytostatic drugs) are they key to a correct assesment and therapy for malignant laryngeal tumors.

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